



32<sup>nd</sup>

# CONFERENCE OF THE EHPS

Health Psychology Across  
The Lifespan:  
Uniting Research,  
Practice and Policy

21-25 August 2018  
Galway, Ireland



CONFERENCE **ABSTRACTS**  
[www.ehps2018.net](http://www.ehps2018.net)



# Wednesday, 22 Aug

## Symposium Abstracts

9:00 - 10:30 The relevance of interoception research for health and disease

Don't forget the parents: The role of parental experience in paediatric chronic conditions.

11:00 - 12:30 Integrating and applying behaviour change theory: a focus on mechanisms of action

Obesity across childhood and adolescence

Ecological Momentary Assessment and diaries to measure health, behaviour, and determinants

14:00 - 15:30 Medication adherence in chronic illness: theory, methods and intervention development

Focusing on fidelity: improving methodology of intervention fidelity assessment within behaviour change intervention research

Psychosocial and neuropsychological aspects in cardiac patients and family members: Innovations in assessment and therapy

Better together? Regulating health within close relationships

You only live once: Youth culture and health.

## Oral Presentations

9:00 - 10:30 ROUNDTABLE: Health Psychology practice in Europe and other countries represented in the EHPS: Moving forward together

Health behaviour and chronic disease

Stress: HPA axis and inflammation

Dietary behaviour change

Theoretical and methodological issues in digital intervention development

11:00 - 12:30 Living with chronic disease

Looking forward and looking back: Feasibility and acceptability of

Wednesday, 22 Aug

interventions

Stress: Cardiovascular physiology

Alcohol and smoking public health interventions

14:00 - 15:30 STATE OF THE ART: Self-regulation in sickness and in health

Sex, drugs and alcohol

## Poster Presentations

15:30 - 17:00 e/m health applications for smoking & alcohol

Understanding uptake & usability of e/mHealth interventions

Alcohol, physical activity, & obesity

Health & wellbeing issues associated with romantic relationships & parenting roles

Paediatric chronic illness & disability

Lifestyle behaviour change

Risk perception & preventive behaviours

Physical activity & health promoting behaviours

Well-being & quality of life in adolescents and young adults

Factors influencing quality of life within the context of pain

Resilience & risk factors in pain experiences

Methods for improving research participant diversity

Personal, social, and environmental resources & health

Innovative interventions in chronic disease

The work environment & employee health

Individual differences in stress reactivity, emotion-regulation, and coping

Stress & physiology: work in progress

Self-management, medication adherence, & chronic illness

Wednesday, 22 Aug

Attitudes & personality in relation to older adults' health

Psychological practice in health settings

Health communication

## Keynote Presentation

17:00 - 18:00 Increasing the impact of behaviour change intervention research: Is there a role for patient and public involvement?

Molly Byrne

# Thursday, 23 Aug

## Symposium Abstracts

- 9:00 - 10:30 Challenging the qual/quant divide: Combining methods in health psychology research
- A NZ and UK perspective of health psychology: Uniting training, research, practice and policy
- Social relationships and health across the illness trajectory: Challenges of harnessing social support for health
- Disparities in pain care: Psychosocial accounts and implications for practice and policy
- 11:00 - 12:30 Women's health issues across the lifespan: Identifying risks and opportunities for change
- Longitudinal perspectives on close relationships and health – from microprocesses to macroprocesses
- 14:00 - 15:30 Sex, gender and pain: a lifespan perspective

## Oral Presentations

- 9:00 - 10:30 Quality of life and well-being in everyday life
- Individual differences and health behavior
- Organ donation, and weight-related behaviours
- Public health interventions with young people
- 11:00 - 12:30 ROUNDTABLE: Beyond academia: Opportunities and challenges of applying health psychology research in practical settings
- ROUNDTABLE: Identifying useful synergies of theory and methods across non-clinical and clinical fatigue
- Communicating health: health, risk, and decision making
- Automaticity and implicit cognitions
- Community and population public health interventions
- Behaviour change: theory informed practice

Thursday, 23 Aug

14:00 - 15:30 STATE OF THE ART: Improving the interpretation of research findings

Theory testing and development in health behaviour context

Behavioural science approaches in implementation and health services research

Chronic disease in young people

Stress and health behaviours

Individual differences in coping with chronic illnesses and syndromes

Digital interventions for health behavior change

## Poster Presentations

15:30 - 17:00 e/mHealth for changing health behaviours

e/mHealth for supporting those with chronic illness

Mental health promotion & occupational health

Family & Health

Stress, coping, & wellbeing during childhood & adolescence

Behaviour change principles & practices

Smoking, alcohol, & substance use

Quality of life & well-being in chronic disease & ageing

Measurement tools & evaluation of psychological aspects of chronic illness

Psychological & emotional aspects of chronic disease

Psycho-social issues & chronic disease

Psychometric properties of measures in health psychology

Just Do It: Lifestyle Health Behaviour Intervention

Stress in occupational & lifestyle contexts

Individual differences in health cognitions

Global health, culture, & well-being

Thursday, 23 Aug

Stress & Physiology

Health Prevention and Interventions in Older Adults

Health professionals' roles in supporting health behaviours

Change in health care services

## Keynote Presentation

17:00 - 18:00 In Pursuit of Principles that are Practical: Pasteur's Quadrant and the Study of Health Behavior Change

Alex Rothman

# Friday, 24 Aug

## Symposium Abstracts

11:00 - 12:30 The 'how' and 'why' of self-regulation techniques in e and mHealth

14:00 - 15:30 Risk communication in new era of genomics

Self-regulation and health behaviors in context: An ecological approach with implications for interventions

Using mobile technology to assess and improve health behaviors: How can we do much better?

Attentional bias modification training in health psychology

## Oral Presentations

9:00 - 10:30 The role of barriers and motivational processes for self-regulation and behavior.

Perceptions and experiences of healthcare delivery

Predictors of Occupational Stress Consequences

Individual, social and societal influences on health and well-being

Emotions and adaptation in chronic disease

Health and well-being in the face of disease

Chronic illness during childhood: Experiences of children & their families

Interventions for Pulmonary Diseases across adolescents and adults

11:00 - 12:30 STATE OF THE ART: Methodological Advances

Dementia – older adult and caregiver perspectives

Barriers and enablers to healthcare change and implementation

Treatment and prevention of pain disorders

Health behaviour models tested and applied in healthcare contexts

Lifestyle change



Friday, 24 Aug

Health behaviours, well-being and developmental context

14:00 - 15:30 ROUNDTABLE: Making a difference: How health psychology influences health globally and what more can we do?

Individual differences: body image, behavior and health

Interventions for Pain, Fatigue, and Arthritis

Families and caregivers facing chronic illness

## Poster Presentations

15:30 - 17:00 Users' perspectives in e/mHealth

Developing & evaluating e/mHealth interventions

Health protection, screening, & primary care

Health behaviours in the early years: the prenatal period to adolescence

Lifestyle behaviour change

Changing behaviour: challenges & solutions

Healthy eating & weight

Perceptions of well-being & quality of life across the lifespan

The experience of having a chronic illness

Cognition, mental health, & adaptation to chronic illness

The many faces of social support & their correlates

Interventions in cardiometabolic and vascular disease

Employee health and well-being

Individual differences in coping & treatment in medical contexts

Stress: sociocultural factors and specialist populations

New directions in researching self-regulation in health & illness

Medication & adaptation in older adults with chronic conditions

Delivery of patient care & health promotion

Friday, 24 Aug

Health Risk Communication and Decision Making

Rapid Communications

Methodological applications to health

## Keynote Presentation

17:00 - 18:00 What can we learn from what people say about their health?

A psychologist's view of an epidemiological finding

Yael Benyamini

# Saturday, 25 Aug

## Symposium Abstracts

9:00 - 10:30 The integration of behaviour models/theories to better understand health behaviour

The role of interoception for clinical research

## Oral Presentations

9:00 - 10:30 Factors of healthy ageing

Coping and psychosocial adaptation to chronic illness

Mobile technology and self-management

Occupational Stress: predictors, mediators and moderators

Behaviour change strategies and process

Social context and health behaviours during childhood

## Keynote Presentation

11:00 - 12:00 Multi-level approaches to behaviour change in implementation research: How far can we push our theories?

Jill Francis

Wednesday, 22 Aug

# SYMPOSIUM: The relevance of interoception research for health and disease

9:00 - 10:30

Larmor

Beate M. Herbert

9:00 - 9:15

## Social exclusion and attentional bias towards high-calorie food: The role of Interoceptive Accuracy and Sensibility

G. Zamariola<sup>1</sup>, O. Luminet<sup>1</sup>, O. Corneille<sup>1</sup>

<sup>1</sup>Université Catholique de Louvain, Belgium

**Background:** Negative emotions arising from the experience of ostracism may lead individuals to implement dysfunctional emotion regulation strategies, e.g., seeking for comfort food. A recent study revealed less negative impact of social exclusion on mood measures among participants scoring higher in Interoceptive Accuracy (IAcc). No prior study examined whether social exclusion also influences attentional bias for food and whether interoception may play a role in the latter relation.

**Methods:** Participants (N = 120) performed the heartbeat perception task to measure IAcc and filled out the Body Awareness Questionnaire to measure Interoceptive Sensibility (IS). Afterwards, they completed the Cyberball paradigm where they were randomly assigned to a social inclusion or exclusion condition. Then, they performed a free viewing eye-tracking task in which they were asked to look at combinations of high, low-calorie food and neutral objects appearing on the screen for one second.

**Findings:** A main effect of IAcc on the first fixation duration when objects and high-calorie food were presented was found: the higher IAcc, the longer first fixations were directed towards objects. Moreover, an interaction effect condition-by-IS on the first fixation duration when high- and low-calorie food were combined was revealed: in the exclusion condition, lower IS was associated with longer fixations to high-calorie food.

**Discussion:** The potential protective role that interoception can play on attentional bias towards high-calorie food was partially confirmed. Future studies should use new techniques to assess IAcc, in particular assessing gastric functions, i.e, the water load test, which focuses on hunger and satiety sensations.

9:15 - 9:30

## Multimodal interoception in overweight and obesity

B. Herbert<sup>1</sup>

<sup>1</sup>University of Tuebingen, Germany

**Background:** We demonstrated that eating behaviour is shaped by interoceptive sensitivity (IAcc): in normal weight women cardiac IAcc assessed via heartbeat tracking is associated with lower BMI and lower self-reported 'intuitive' eating behaviour. Impaired cardiac IAcc is documented in eating disorders and obesity. However, findings on gastric sensitivity are sparse. Own studies demonstrate that individual gastric sensitivity can be reliably assessed by use of Water Load Tests (WLT) that allow measuring levels of sensed fullness. Up to today, it is an open question how multimodal interoception is related to overweight, obesity and eating behaviour. This was examined in the presented study.

**Methods:** 26 normal weight women, 23 overweight, and 23 obese women completed heartbeat perception accuracy task, standardized WLT protocol testing and measures of self-reported eating behaviour.

**Findings:** Cardiac and gastric sensitivity was significantly ( $p < 0.01$ ) diminished in obese compared to overweight and normal weight participants. Significant correlation of cardiac and gastric sensitivity existed in all participants, however, within the obese group there was no interoceptive overlap ( $r = -.13$ ,  $p = .69$ ). The groups differed with respect to the negative association of gastric and cardiac IAcc and disinhibited and restrictive eating behaviour.

**Discussion:** Results suggest that both overweight and obese individuals have impaired interoceptive sensitivity across gastric and cardiac modalities, with obese persons showing no interoceptive overlap of modalities, supposing major dysfunction of multimodal interoceptive feedbacks in obese individuals that is associated with maladaptive eating behaviour. These findings are discussed with respect to their meaning for intervention.

9:30 - 9:45

## Interoceptive sensibility, accuracy and awareness in obese patients

D. Grynberg<sup>1</sup>, C. Willem<sup>1</sup>, M. Gandolphe<sup>1</sup>, F. Pattou<sup>1</sup>, M. Rivenet<sup>2</sup>, B. Hiriart<sup>2</sup>, J. Nandrino<sup>1</sup>

<sup>1</sup>Lille University, France

<sup>2</sup>LADAPT NORD - CSSR Pédiatrique, 59400 Cambrai, France, France

**Background:** Interoception refers to the ability to represent the state of the body and to perceive changes arising from the body as feelings and sensations. It has been suggested that obesity is characterized by interoceptive deficits. However, only few studies have examined this question. Based on a breathing interoception task, we tested whether obesity is associated with impaired interoceptive sensibility, accuracy, and awareness.

**Methods:** in Study 1, obese adult patients and adults with normal weight completed measures of interoceptive awareness (MAIA). In the Study 2, obese teenage patients and teenagers with normal weight completed measures of interoceptive awareness (MAIA) and a breathing interoceptive task.

**Findings:** Among the adults sample (Study 1), results suggested that obese patients have lower trust in their body signals than healthy controls. Among teenagers (Study 2), results supported that obese patients report lower trust in their body signals. In addition, obese patients showed lower interoceptive sensibility compared to healthy subjects (over or underestimate their breathing signals). However, results suggested that obese patients did not differ from healthy subjects in terms of interoceptive accuracy (objective behavioral breathing performance score).

**Discussion:** These results suggest that obese patients have impaired interoceptive sensitivity, whereas they seem to have preserved interoceptive accuracy. Future studies are thus needed to better understand whether impaired interoception is associated with specific problematic eating behaviours (e.g., emotional eating, bulimia) and whether it can be improved among obese patients.



9:45 - 10:00

## Modification of interoceptive abilities using neurostimulation and mindfulness-based techniques

O. Pollatos<sup>1</sup>

<sup>1</sup>University of Ulm, Germany

**Background:** There are several possible ways how changing interoceptive abilities might interact positively with different health outcomes. This topic is of high relevance as it is known that interoceptive abilities are reduced in different clinical groups such as eating-disorder, depressed or somatoform patients. We therefore examined possibilities aiming at changing interoceptive abilities, especially interoceptive accuracy (IAcc) both in healthy participants as well as in clinical samples.

**Methods:** Two studies in healthy students used either neurostimulation (N=20) or mindfulness-based techniques (N=36) to alter interoceptive abilities. Two further studies in depressed patients (N=32) as well as in chronic pain patients (N=30) used mindfulness-based techniques while interoceptive abilities were examined in the time-course of therapy. Interoceptive abilities were examined using both different dimensions of interception (including IAcc) as well as different interoceptive modalities (cardiac, respiratory).

**Findings:** Mindfulness-based techniques (IAcc:  $F=5.33$ ;  $p < 0.01$ ) and neurostimulation (IAcc:  $F=6.67$ ;  $p < .01$ ) could alter interoceptive abilities in healthy participants, with differential effects on the modality assessed. The results in patients' groups are less consistent focusing on IAcc (depression:  $F=1.05$ , n.s.; chronic pain:  $F=3.22$ ,  $p=.10$ ).

**Discussion:** We conclude that the duration and the intensity of daily practice seems to crucially limitate the effects of mindfulness based techniques in both healthy participants and clinical samples. Using neurostimulation might differentially influence different interoceptive channels as assessed using the respiratory and the cardiovascular system. It is important to provide more evidence for methods associated with the body in the long-term time latency.

**SYMPOSIUM: Don't forget the parents:  
The role of parental experience in  
paediatric chronic conditions.**

9:00 - 10:30

Room 201

Line Caes

9:00 - 9:15

## Worries, mindfulness and parenting: A diary study in parents of children with type 1 diabetes

C. Van Gampelaere<sup>1</sup>, K. Luyckx<sup>2</sup>, D. Van Ryckeghem<sup>1,3</sup>, L. Goubert<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

<sup>2</sup>University of Leuven, Belgium

<sup>3</sup>University of Luxembourg, Luxembourg

**Background:** Mechanisms by which parental distress and worries influence child outcomes in the context of paediatric Type 1 diabetes (T1D) are largely unknown. Contemporary theoretical accounts suggest that parental distress and worries motivate parents to engage in overprotective/intrusive behaviours toward their child. Parental mindfulness is suggested to serve as a protective mechanism. The current study investigates the contribution of daily parental worries in explaining parental behaviour. Furthermore, parental mindfulness is examined as a possible buffer against the negative effects of daily worries.

**Methods:** Participants were 56 parents of 40 children with T1D (2-12 years). Dispositional mindfulness was assessed via self-report measures (MAAS and KIMS-E-NL) in all parents. Next, all parents filled out a diary for 14 consecutive days, assessing parental worries about hypoglycaemia and hyperglycaemia, parental (general and diabetes-specific) overprotective behaviour, autonomy support, psychological control and responsiveness.

**Findings:** Multi-level analyses showed that parents who worried a lot about their child's diabetes were overly protective (range  $p$ : .03 - .05). However, contrary to expectations, parental worries were not related to psychological control, autonomy support, and responsiveness. Furthermore, mindful parents were less worried about hypoglycaemia ( $p=.005$ ) and showed lower engagement in general overprotective behaviour ( $p=.047$ ), hypoglycaemia avoidance behaviour ( $p=.032$ ) and psychological control ( $p=.012$ ). Additionally, the relationship between worries about hyperglycaemia and general overprotective behaviour was moderated by parental mindfulness ( $p=.031$ ).

**Discussion:** Findings highlight the important role of daily parental worries in explaining same day parental overprotection. Additionally, parental mindfulness emerged as a promising resilience factor in parents of children with T1D.

9:15 - 9:30

## Illness intrusiveness and well-being in mothers and fathers of youth with type 1 diabetes

S. Prikken<sup>1,2</sup>, L. Oris<sup>1,2</sup>, K. Raymaekers<sup>1</sup>, I. Weets<sup>3,4</sup>, P. Moons<sup>1,5</sup>, K. Luyckx<sup>1</sup>

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<sup>5</sup>University of Gothenburg, Sweden

**Background:** Type 1 diabetes is considered a family disease that affects the daily lives and functioning of patients as well as their parents. As a couple, parents might also influence each other's functioning. Inspired by actor-partner interdependence modeling, we examined maternal and paternal illness intrusiveness, depressive symptoms, and satisfaction with life. We payed attention to both actor (i.e., the importance of the parent's own functioning on outcomes) and partner effects (i.e., the importance of the partner's functioning).

**Methods:** The first wave of an ongoing longitudinal study in youth with type 1 diabetes (aged 14-25) and their parents resulted in 291 parental dyads, all living together and with their child with diabetes. Parents reported on their illness intrusiveness, depressive symptoms, and satisfaction with life. Paired samples t-tests and preliminary cross-sectional regression analyses were performed, with depressive symptoms and satisfaction with life being predicted by actor (one's own illness intrusiveness) and partner effects (the partner's illness intrusiveness and depressive symptoms/satisfaction with life).

**Findings:** Mothers experienced more illness intrusiveness, more depressive symptoms, and lower satisfaction with life compared to fathers. Regression analyses revealed actor effects for depressive symptoms, being positively predicted by one's own illness intrusiveness. Satisfaction with life was predicted by one's own illness intrusiveness and by the partner's satisfaction with life, indicating both actor and partner effects.

**Discussion:** From a micro-contextual perspective, examining maternal and paternal functioning and their interdependence might reveal important mechanisms that may also be related to patient functioning. The current findings should be longitudinally examined as well.

9:30 - 9:45

## Understanding the impact of paediatric inflammatory bowel disease on the entire family

L. Caes<sup>1</sup>, C. Chambers<sup>2</sup>, A. Otley<sup>2</sup>, J. Stinson<sup>3</sup>

<sup>1</sup>University of Stirling, United Kingdom

<sup>2</sup>Dalhousie University & IWK Health Centre, Canada

<sup>3</sup>The Hospital for Sick Children, Canada

**Background:** Evidence is accumulating revealing the key role of the family environment in understanding how youth cope with inflammatory bowel disease (IBD) and related symptoms, such as abdominal pain. However, little is known about which particular aspects of family functioning impact youth's outcomes. The study aimed to investigate the influence of parental and youth perspectives on family functioning and observed family communication patterns on youth's pain experiences and health-related quality of life (HRQOL).

**Methods:** Sixty youth with IBD and a parent completed questionnaires to assess family functioning, HRQOL and pain experiences within the past week. Additionally, parents and youth engaged in a conflict discussion task to discuss an aspect of the youth's IBD treatment that causes conflict. The conflict discussion task was videotaped and coded using the System for Coding Interactions and Family Functioning coding scheme.

**Findings:** Lower levels of pain intensity and higher levels of youth-reported family satisfaction were both related to better HRQOL. Youth-reported family functioning did not impact pain experiences. However, higher levels of parent-reported family cohesion and satisfaction were associated with lower pain intensity, which was in turn related better HRQOL. For observed family functioning, only youth's anger and frustration expressed during the conflict discussion task was related to more pain intensity and lower HRQOL.

**Discussion:** The findings provide a rich picture of which aspects of family functioning and communication impact pain experiences and HRQOL of youth with IBD and underscore the importance of applying a family systems approach to understand how IBD impacts youth.

9:45 - 10:00

## Child pain and well-being: The role of parental perceptions of injustice.

F. Baert<sup>1</sup>, Z. Trost<sup>2</sup>, A. Hirsh<sup>3</sup>, M. Miller<sup>3</sup>, T. Vervoort<sup>1</sup>, M. De Schryver<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

<sup>2</sup>University of Alabama at Birmingham, United States

<sup>3</sup>Indiana University - Purdue University Indianapolis, United States

**Background:** Pain-related injustice appraisals, as indexed by means of the Injustice Experience Questionnaire, have been consistently shown to impact upon individuals' pain experience. An emerging line of research in the context of pediatric pain is increasingly focusing on the interpersonal impact of parental appraisals upon child pain (e.g. parental catastrophizing). Witnessing their child suffer important losses due to the pain condition may engender a sense of (child-oriented) injustice among parents. However, given the dependent nature of the parent-child relationship, parents may find themselves suffering substantial losses in order to fulfil their caregiving responsibilities. Therefore, they might also experience a sense of (self-oriented) injustice. The current study explored the role of parental injustice appraisals in understanding child pain experience.

**Methods:** 407 parents of healthy school children and 319 parents of children suffering from chronic pain reported on self- and child-oriented injustice (IEQ-C/S) and parental catastrophizing (PCS-P). Children in both samples reported on perceived injustice (IEQ-Child), functional disability (FDI) and health-related quality of life (PedsQL). A series of multiple hierarchical regression analyses was conducted to examine the role of parental injustice perceptions in explaining child outcomes, independent from parental catastrophizing.

**Findings:** In the school sample, fathers' self-oriented injustice perceptions contributed significantly to child emotional ( $p < .1$ ) and social functioning ( $p < .05$ ). In the clinical sample, parental self-oriented injustice perceptions contributed significantly to child functional disability ( $p < .1$ ) and physical, emotional, social and academic functioning ( $|p| < .05$ ).

**Discussion:** The current study supports the idea that parental injustice perceptions may be important in understanding child adjustment to pain.

10:00 - 10:15

## How I dealt with a diagnosis of Juvenile Idiopathic Arthritis for my child.

W. Costello<sup>1</sup>

<sup>1</sup>iCAN, Ireland

I want to thank you for the invitation to give my testimony, which will illustrate many of the parental struggles that will be discussed in the symposium 'Don't forget the parents: The role of parental experience in paediatric chronic conditions'. I will be talking about my life as a carer for my daughter Niamh who lives with a chronic autoimmune condition called Juvenile Idiopathic Arthritis (JIA). Niamh was diagnosed at 3 years of age after numerous visits to our GP and local A&E. Our whole world was turned upside down as we struggled to find out information on JIA and what the long-term implications were. I found at this stage it was me who needed support so I helped set up a Facebook page so I could chat to other parents. This grew quickly and I set up a charity called iCAN 5 years ago. We raise awareness of JIA and support families. My life and my daughter's life has had lots of ups and downs but I have always believed in a positive attitude. Together we worked hard going to physio, swimming, occupational therapy visits and for 2 long years weekly visits to Dublin for a biologic infusion, but the one thing I wanted to do for her I couldn't, I wanted the burden of this disease. Seeing her struggling to get out of bed in the morning broke my heart but being told she would never grow out of it was the worst day we had to face.

# SYMPOSIUM: Integrating and applying behaviour change theory: a focus on mechanisms of action

11:00 - 12:30

O'Flaherty

Rachel Carey



11:00 - 11:15

## The Contributions of the Science of Behaviour Change Program to Advance Basic Behaviour Change Mechanisms

K. Davidson<sup>1</sup>, R. West<sup>2</sup>, S. Michie<sup>2</sup>, M. Johnston<sup>3</sup>, T. Cornelius<sup>1</sup>

<sup>1</sup>Columbia University Medical Center, United States

<sup>2</sup>University College London, United Kingdom

<sup>3</sup>University of Aberdeen, United Kingdom

**Background:** Health behaviour theories postulate mechanisms, but these are rarely tested in a rigorous, transparent, and replicable fashion. The NIH Common Fund's Science of Behavior Change (SOBC) Program is creating a standardized method to address these issues.

**Methods:** Eight interdisciplinary SOBC teams are employing a consistent, mechanism-focused, experimental medicine approach to identify, measure, and then influence basic behavioural mechanisms of action. They have identified and measured putative mechanisms of self-regulation, stress reactivity and resilience, and interpersonal and social processes with this method. Teams will then engage the successful targets through experimentation and/or intervention and examine subsequent behaviour change.

**Findings:** Our standardized method for determining valid basic behavioural mechanisms will be presented. The 100-plus identified and measured targets will be displayed, as well as how to access them. The results on target engagement will also be presented: episodic future thinking—an intervention that encourages thinking in detailed ways about future events—has engaged the hypothesized mechanism of delay discounting (i.e., the tendency to favour small rewards now over larger rewards in the future); mindfulness interventions have engaged self-regulation targets, including attention control and emotional non-reactivity; cognitive restructuring interventions have engaged coercive conflict communication in couples' relationships, a putative target that can interfere with medical regimen adherence.

**Discussion:** By using a standardized, rigorous mechanism-focused approach to behaviour change mechanism research, the SOBC program is working to identify key processes underlying successful behaviour change. Ultimately, these findings will be used to develop more efficient and effective behaviour change interventions.

11:15 - 11:30

## Development of a method for specifying behaviour change theories to facilitate comparison and integration

R. West<sup>1</sup>, S. Michie<sup>2</sup>, C. Lefevre<sup>1</sup>, C. Godinho<sup>3</sup>, L. Connell<sup>2</sup>, R. Carey<sup>2</sup>

<sup>1</sup>UCL, United Kingdom

<sup>2</sup>University College London, United Kingdom

<sup>3</sup>ISCTE - Instituto Universitario de Lisboa, Portugal

**Background:** A review of 83 theories of behaviour change found a wide variety of approaches to theory description. This hampers the ability to compare and integrate theories (e.g., using computational methods), to promote theory use and to advance theory. This study aimed to develop a standard, formal method for specifying theories of behaviour change in terms of sets of construct labels and definitions, together with specification of binary relationships between pairs of constructs.

**Methods:** Descriptions of five commonly used theories were generated from the original theory sources in terms of their constructs (e.g., 'self-efficacy', 'perceived threat', 'subjective norm'), and variants of three types of relationship (causal, structural, semantic). They were represented by diagrams in machine-readable format. These were sent to theory authors or major theory users for comment and the descriptions adjusted where indicated by feedback.

**Findings:** A total of 85 constructs and 13 core types of relationship was identified. The theory authors and major users were satisfied that the modelling system was able to capture key features of their theories adequately. The results suggested that this standardised form could capture the main tenets of behaviour change theories.

**Discussion:** This method could be used both for reformulating existing theories and for developing new theories. This would set the scene for a more systematic approach to theory development and use. The next step is to assess to what extent this method can generalise to other theories of behaviour change.

11:30 - 11:45

## Making sense of behaviour change theories: applying a method for theory specification across 83 theories

S. Michie<sup>1</sup>, R. West<sup>1</sup>, C. Lefevre<sup>2</sup>, C. Godinho<sup>3</sup>, L. Connell<sup>1</sup>, H. Groarke<sup>1</sup>, A. Direito<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

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<sup>3</sup>ISCTE - Instituto Universitario de Lisboa, Portugal

**Background:** To increase our understanding of current theories of behaviour change, and advance the testing and refinement of theories, a method has been developed for systematically specifying constructs and their relationships. The next step is to determine whether this method can be used across a large number of theories with sufficient precision to (i) represent all constructs and relationships as machine-readable diagrams, and (ii) investigate similarities, differences and overlaps between theories.

**Methods:** Of an initial set of 83 theories, four had been integrated into a fifth and two were judged not to meet the criteria of a theory of behaviour. All constructs of the remaining 77 theories were extracted from the published reports; definitions were generated where missing. Applying the method developed for five theories, a diagram of each theory was generated using Lucid Chart software. Definitions and diagrams were checked with 74 theory authors or other theory experts.

**Findings:** The response rate from authors and experts was 78 percent (N=58). There appeared to be general agreement from theory authors and experts that the method for specifying theories could capture their key features. A majority of authors and experts who responded (N=38) agreed with the proposed characterisation of the theory or proposed minor revisions. The most frequent types of suggestions were to amend relationships between constructs (N=20), or to remove or add constructs (16 theories).

**Discussion:** Results suggest that it is possible to represent a wide array of behavioural theories using the systematic method proposed to produce machine-readable diagrams.

11:45 - 12:00

## Linking behaviour change techniques and mechanisms of action: comparison of literature synthesis and expert consensus

M. Johnston<sup>1</sup>, R. Carey<sup>2</sup>, L. Connell<sup>3</sup>, D. Johnston<sup>1</sup>, A. Rothman<sup>4</sup>, M. de Bruin<sup>1</sup>, M. Kelly<sup>5</sup>, S. Michie<sup>2</sup>

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<sup>4</sup>University of Minnesota, United States

<sup>5</sup>University of Cambridge, United Kingdom

**Background:** There is a need for greater understanding of how and why behaviour change techniques (BCTs) have their effects. Links between BCTs and mechanisms of action (MoAs) have been investigated in two previous studies a) synthesising links in published literature and b) expert consensus. The aim of the current study is to examine the relationship between the findings of these two sources of evidence.

**Methods:** For each of the 1512 possible links between 61 BCTs and 26 MoAs, linkage was estimated in the literature study by marginal probability values (based on the frequency of occurrence of each BCT and MoA) and in the consensus study by percentage of experts agreeing that a link existed, or did not exist. The relationship between the linkage estimates were examined in multilevel models with BCTs nested within MoAs to examine overall linkage and linkage differences between MoAs.

**Findings:** Estimates of linkage from literature correlated with expert consensus that a link was, or was not, present (MLM beta estimates .33 and -.33) with little variation in agreement between the MoAs. Using pre-specified cut-offs, the two sources agreed that 65 links were present and that 389 were not present.

**Discussion:** The two sources of evidence show considerable agreement, with agreement being similar over MoAs. For each MoA, we have identified BCTs which both literature and consensus expect to be effective in changing behaviour by changing the MoA and these links merit empirical investigation. Further work aims to resolve disagreements between the two sources of evidence.

# SYMPOSIUM: Obesity across childhood and adolescence

11:00 - 12:30

Dillon

Marita Hennessy

11:00 - 11:15

## Early life obesity prevention: A systematic review of the effectiveness of health professional-delivered interventions

M. Hennessy<sup>1</sup>, C. Heary<sup>1</sup>, R. Laws<sup>2</sup>, L. Van Rhoon<sup>1</sup>, E. Toomey<sup>1</sup>, M. Byrne<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

<sup>2</sup>Deakin University, Australia

**Background:** We conducted a systematic review to assess the effectiveness of health professional-delivered interventions which aim to reduce the risk of overweight and obesity in children aged two years and under and to explore what behaviour change theories and techniques were associated with intervention outcomes.

**Methods:** Systematic searches of 11 electronic databases, 3 trial registry databases and cross-checking reference lists of full-texts retrieved were undertaken to identify eligible randomised or quasi-randomised controlled trials. The primary outcome was difference in weight-related measures. Secondary outcomes were diet-, activity-, and sedentary-related behaviours; environment; cost-effectiveness. Intervention details were extracted according to the descriptions outlined in the TIDieR reporting guidelines. Primary and secondary outcomes were recorded in detail, including definitions and measures used by authors. Intervention procedures were coded using the BCT taxonomy (version 1), intervention functions using the Behaviour Change Wheel and the extent to which interventions used theory via the Theory Coding Scheme. The methodological quality of studies was assessed using the Cochrane Collaboration tool for assessing the risk of bias while generalisability was evaluated using an external validity checklist. Two review authors independently undertook data extraction and coding. Findings were collated in a narrative synthesis.

**Findings:** 153 papers, representing 35 trials were included, from the 16,044 records identified, 8,043 abstracts screened and 110 full-texts reviewed. Interventions demonstrated inconsistent effects on primary and secondary outcomes. Several methodological limitations were noted, impacting on efforts to establish the active ingredients of interventions.

**Discussion:** Findings have implications for the conduct, reporting, and translation/scalability of interventions.

11:15 - 11:30

## How can routine feedback from National Child Measurement Programmes be harnessed to support behaviour change?

L. Atkinson<sup>1</sup>

<sup>1</sup>Aston University, United Kingdom

A multitude of childhood obesity surveillance programmes are currently in operation across Europe and globally. While these are not intended as screening programmes, it has been suggested that providing the results of a child's anthropometric measurements to parents/carers (henceforth referred to as 'parents' for simplicity) may offer an opportunity to raise awareness of a child's weight status with those parents, and to proactively offer both health advice and access to relevant support services. In England, media coverage and research with parents reveals the many complexities of presenting this information in a form that is understandable, non-judgemental and minimises distress to both parents and children. Until these challenges are overcome the ability to harness this information to inspire and support appropriate behaviour change is extremely limited. By examining research with parents, school health advisors and children, valuable insight is gained into how to effectively communicate a child's weight status to both parents and children, and potential interventions are subsequently proposed.

11:30 - 11:45

## Impact of parental perceptions of child obesity and HRQoL on subsequent child weight outcomes

L. Cutler<sup>1</sup>, B. Arnott<sup>1</sup>, A. Jones<sup>1</sup>, A. Adamson<sup>1</sup>

<sup>1</sup>Newcastle University, United Kingdom

**Background:** Parents typically do not report overweight/obesity in their children. Child weight status is inversely related to their health-related quality of life (HRQoL). It is proposed that correct parental perceptions, and acknowledgement of the negative impact on HRQoL, of overweight/obesity may prompt appropriate action, thus improving child weight outcomes. Parental perceptions of child obesity and child HRQoL as predictors of change in child body mass index (BMI) percentile 12 months later were examined.

**Methods:** Using data from the 4&UPP study, 74 parents of children with obesity aged 4-5 and 10-11 years rated their child's weight status using a categorical and visual measure, and HRQoL using a parent-proxy, obesity-specific questionnaire (Sizing Them Up). Children's weight status was determined using UK 1990 growth reference criteria from objectively measured height and weight. Linear regressions for variables predicting change in child BMI percentile at 12 months follow-up, controlling for baseline BMI percentile, were conducted.

**Findings:** Child age, parental perceptions of obesity, and parent-reported HRQoL significantly predicted change in child BMI percentile. Being in the older age group, correct parental perceptions of child weight status using the visual measure only, and lower parent-reported HRQoL predicted higher child BMI percentile at follow-up. Only HRQoL remained significant when controlling for other variables.

**Discussion:** Results suggest, contrary to our hypothesis, reporting of lower HRQoL for children with obesity is not beneficial to subsequent BMI percentile. Further research is needed to understand how parental perceptions of child weight, and particularly of child HRQoL contribute to obesity.



11:45 - 12:00

## Gender differences in adolescents' body areas satisfaction explaining body mass via physical activity and diet

K. Zarychta<sup>1</sup>, M. Kruk<sup>1</sup>, C. Chan<sup>2</sup>, A. Luszczynska<sup>1,3</sup>

<sup>1</sup>University of Social Sciences and Humanities, Poland

<sup>2</sup>Australian Catholic University, Australia

<sup>3</sup>University of Colorado at Colorado Springs, United States

**Background:** Satisfaction with one's appearance is among key cognitive determinants of healthy behaviors, such as healthy eating and moderate-to-vigorous physical activity (MVPA). In turn, these behaviors help to prevent overweight and obesity. This study tested the relationships between gender-specific body areas satisfaction and body mass index (BMI) mediated by healthy or unhealthy eating and MVPA in a non-clinical sample of adolescents.

**Methods:** Data were collected three times, with a 2-month and 11-month follow-ups. Adolescents (N = 1254) aged 13-18 (58.3% girls) answered the questions evaluating their eating behaviors and physical activity and filled out The Multidimensional Body-Self Relations Questionnaire, assessing body areas satisfaction. Gender-specific body areas satisfaction was measured with different instruments applied in boys and in girls. BMI was measured with objective indicators.

**Findings:** Significant differences between boys and girls were observed in their behaviors (with boys being more physically active and eating more unhealthy, and girls eating more healthy). In boys and girls, MVPA (Time 2, T2) mediated the relationship between gender-specific body areas satisfaction (Time 1, T1) and BMI (Time 3, T3), but no mediating effects of healthy or unhealthy diet (T2) were found.

**Discussion:** Gender-specific body areas satisfaction should be carefully considered in screening for adolescents at risk to become overweight or obese as it was found to be a significant predictor of MVPA, which in turn predicted adolescents' lower BMI.

12:00 - 12:15

## School food environments and adolescent health

C. Kelly<sup>1</sup>, M. Callaghan<sup>1</sup>, M. Molcho<sup>1</sup>, S. Nic Gabhainn<sup>1</sup>, A. Alforque Thomas<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

**Background:** School food environments are important determinants of children's dietary habits. This study explored fast food outlets surrounding schools and youth dietary habits as well as adolescent's perception of their school food environments.

**Methods:** Post-primary schools (n=63) in the 2010 Irish Health Behaviour in School-aged Children survey were mapped using ArcMap 10.2 and all food premises within a one kilometre radius of the schools were categorised into food businesses using GeoDirectory. Associations between fast food environments and daily food consumption were expressed in odds ratios from logistic regression models in Stata, version 12.0. Qualitative data from 95 young people were also collected, using mapping exercises and focus groups. Thematic analysis was used to illuminate their perceptions of the school food environment.

**Findings:** Controlling for socio-demographic factors, students at schools where more than 10% of the surrounding outlets were fast food establishments were less likely to have daily fruit (OR 0.78, 95% CI 0.64-0.94) and vegetables (OR 0.79, 95% CI 0.66-0.93). Students at disadvantaged schools were more likely to have soft drinks (OR 1.79, 95% CI 1.30-2.47) and less likely to have fruit (OR 0.79, 95% CI 0.62-0.99) and vegetables (OR 0.73, 95% CI 0.60-0.88) than students at other schools. Young people described price, location and time as key barriers to choosing healthy food and many want more healthy options during school hours.

**Discussion:** Objective and subjective data indicate that it is time to reconsider a ban on fast food premises near schools to enable access to more healthy food options.

# SYMPOSIUM: Ecological Momentary Assessment and diaries to measure health, behaviour, and determinants

11:00 - 12:30

McMunn

Ann DeSmet

11:00 - 11:15

## Reporting of adherence to adult health-related mobile Ecological Momentary Assessments (mEMA): a systematic review

K. Ferrar<sup>1</sup>, F. Fraysse<sup>1</sup>, H. Lewthwaite<sup>1</sup>, A. Gajewska<sup>2</sup>, J. Ignatavicius<sup>2</sup>, M. Williams<sup>1</sup>

<sup>1</sup>Alliance for Research in Exercise, Nutrition and Activity, Sansom Institute, University of South Australia, Australia

<sup>2</sup>School of Health Sciences, University of South Australia, Australia

**Background:** mEMA technology allows the collection of real time health-related data. Reporting of mEMA protocols and adherence have been identified as problematic within child and youth studies. This systematic review sought to describe reports of mEMA adherence in studies of adult health-related behaviour and symptoms.

**Method:** Nine electronic databases were searched (2006- November 2017) for observational studies reporting adherence to mEMA schedules for health-related data from adults (>18 years) in non clinical and clinical settings. Narrative synthesis was used to describe reporting of mEMA adherence and key factors likely to impact adherence (e.g. training, question/prompt burden and incentives).

**Findings:** Of 177 eligible studies, 108 (non clinical = 69, clinical = 41 data sets) reported mEMA adherence. Adherence was inconsistently reported (range between single mention of cohort percent to per person rates, cohort and per person percentages, with and without exclusions). Cohort adherence ranged between 68.9 and 95.6% (non clinical) and 73 to 98.5% (clinical). Approximately 75% of studies reported training, but detail varied widely. Where reported the minimum number of questions per survey occasion ranged between 1-32 (non-clinical) and 1-73 (clinical) and minimum number of prompts over the mEMA assessment period ranged between 12 to 312 (non-clinical) and 6 to 336 (clinical). Reporting of incentives ranged between 49% (clinical) and 74% of studies (non-clinical).

**Discussion:** Overall reporting of adherence to, and key features within, mEMA protocols was poor and inconsistent. Without transparent and explicit reporting of mEMA schedules and adherence, inferences about representativeness of 'real life' health-related patterns are questionable.

11:15 - 11:30

## Usability of ecological momentary assessment in a study on sleep, physical activity and sedentary time

A. DeSmet<sup>1,2</sup>, G. Cardon<sup>1</sup>, I. De Bourdeaudhuij<sup>1</sup>, G. Crombez<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

<sup>2</sup>Research Foundation Flanders, Belgium

**Background:** This study presents usability data of mobile EMA to measure type and correlates of day-time sleep, physical activity and sedentary behaviour, and assesses relations with log information on EMA completion.

**Methods:** A random sample of working-age adults (age 22-55y) was drawn from the civil registry in Ghent, Belgium. One hundred adults started the study (2 dropouts), 86 participated in the process evaluation. EMA was completed 3 times /day (time-based sampling, morning/afternoon/evening) during 14 days. Process evaluation data (twelve 5-pt Likert questions) were collected in an online survey after the study ended. Ethical approval and active informed consent for the study were obtained.

**Findings:** Average time to complete EMA was 2'48", average completion rate of prompts was 86%. Completion rates dropped most markedly on day 9. Average latency time to answer prompts was 51'. Latency was higher for evening (67') than for morning (39') or afternoon (47') prompts. Latency increased as study duration progressed: 25-28' for day 1-2; 38-51' for day 2-5; 55-70' for day 6-14. Completion rates positively correlated with perceived enjoyment and usefulness of completing EMA and with low perceived burden of EMA prompts (too many, difficult to keep up, inconvenient times). Latency time was negatively correlated with ease of use and positively with perceived burden of EMA prompts.

**Discussion:** It may be warranted to interrupt EMA data collection to reduce latency time as study time progresses. Clarifying rationales for EMA to participants and creating a fun and easy to navigate EMA may increase completion and reduce latency.

11:30 - 11:45

## Better not talk about it? Association of couple's daily co-rumination with cancer patient's fatigue severity.

F. Müller<sup>1</sup>, M. Hagedoorn<sup>1</sup>, E.C. Soriano<sup>2</sup>, E. Stephenson<sup>3</sup>, A. Smink<sup>1</sup>, A. DeLongis<sup>3</sup>, J. Laurenceau<sup>2</sup>, M.A. Tuinman<sup>1</sup>

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<sup>2</sup>University of Delaware, United States

<sup>3</sup>University of British Columbia, Canada

**Background:** Fatigue is a prevalent symptom for many cancer patients. Patients' catastrophizing thoughts about their fatigue are known to worsen fatigue. Spouses also may engage in catastrophizing about patient fatigue, thus further contributing to increases in fatigue. However, the pathway through which cognitions translate into increased symptoms is not well understood. The current study investigated whether patient and spouse catastrophizing translate into worse fatigue through co-rumination—extensively talking about fatigue-related worries (H1). Co-rumination, while maladaptive for patients' symptoms, was predicted to foster couples' relationship satisfaction (H2).

**Method:** Post-treatment cancer patients and their spouses (N=101 dyads) completed daily diaries for 14 consecutive days. Patients and spouses reported on their catastrophizing about the patient's fatigue, co-rumination, and their relationship satisfaction. Patients also reported on their fatigue severity. Multilevel structural equation modelling was applied to test within-person actor- and partner effects between catastrophizing, co-rumination and fatigue (H1) and co-rumination and relationship satisfaction (H2) while controlling for previous levels of the outcome.

**Findings:** As expected, patient and spouse catastrophizing were related to increases in patient's fatigue. Patient catastrophizing was directly related to increases in fatigue ( $b=0.52$ ,  $p<.01$ ) while the effect of spouse catastrophizing on patient fatigue was mediated through co-rumination ( $b=0.32$ ,  $p<.01$ ). Patient- and spouse-reported co-rumination was unrelated to both dyad members' relationship satisfaction ( $p$ 's $>.05$ ).

**Discussion:** Co-rumination is a dyadic pathway that explained how spouse cognitions translates into worse patient outcome. Reducing patient and spouse catastrophizing and fostering adaptive dyadic communications could be targets for interventions aiming to relieve fatigue in post-treatment cancer patients.

11:45 - 12:00

## Methods for Understanding Ecological Momentary Assessment Data Nested within Longitudinal Epidemiological Cohort Studies

G. Dunton<sup>1</sup>, S. O'Connor<sup>1</sup>

<sup>1</sup>University of Southern California, United States

**Background:** Nesting Ecological Momentary Assessment (EMA) within longitudinal epidemiological cohort studies can provide insight into how psychological and health behavior variables change across micro- (e.g., minutes/hours), meso- (e.g., days/weeks), and macro- (e.g., months/years) timescales. This presentation will discuss methods for examining changes in within-subject means (i.e., usual levels), variances (i.e., fluctuations), and covariances (i.e., associations) for time-varying variables across these different timescales.

**Methods:** Children (N=182, ages 8-12 years) participating in the Mothers and Their Children's Health (MATCH) cohort completed five semi-annual EMA waves. During each wave, they were randomly prompted by smartphone to report negative affect (NA) and sports/exercise (S/E) every few hours during non-school time across seven days (11,765 total occasions). Mixed-effects location-scale models examined day-, wave-, and person-level predictors of within-subject means, variances, and covariances.

**Findings:** Within-subject mean and variance in NA decreased by day in the study ( $p$ 's<.05) and wave ( $p$ 's<.001), and were positively associated with Body Mass Index (BMI) ( $p$ 's<.01). Mean NA was lower on weekend days ( $p$ =.006). Mean S/E decreased by day of the study ( $p$ <.001) and wave ( $p$ <.001); and was lower on weekend days ( $p$ <.001) and among children with higher BMI ( $p$ <.08). The within-subject covariance between NA and S/E was not significant and did not change across time.

**Discussion:** Changes in within-subject means and variances by day in the study may reflect reporting biases as children use the response scales differently after repeated assessments. In contrast, changes in within-subject means and variances by measurement wave may reflect emotional and behavioral developmental influences.

12:00 - 12:15

## Pre-intervention modelling: Applying observational n-of-1 design to develop and conduct precision behaviour change studies

D. Kwasnicka<sup>1</sup>, M. McCann<sup>2</sup>, F. Naughton<sup>3</sup>

<sup>1</sup>Curtin University & Central Queensland University, Australia

<sup>2</sup>University of Glasgow, United Kingdom

<sup>3</sup>University of East Anglia, United Kingdom

**Background:** Theories of behaviour change are usually conceptualised to apply to individuals and individual-level behaviour change interventions aim to achieve within-participant change. However, between-participant designs are most often used when theories or interventions are tested, meaning group-derived rather than individual-derived relationships are assessed. This talk outlines pre-intervention modelling via observational n-of-1 design and highlights its advantages, limitations and applicability over and beyond traditional nomothetic approaches.

**Methods:** N-of-1 studies test predictions within individuals based on repeated measurement of variables within the individual over time. Ecological Momentary Assessment (EMA) is used to explore predictor variables, behaviours, and behavioural outcomes. Once an understanding of the current pattern of behaviour is gained, personalised interventions of behaviour change can be applied and tested.

**Findings:** The intricacies of the observational n-of-1 design will be demonstrated using findings of a recent n-of-1 study looking at alcohol consumption following Minimum Unit Price policy change in Scotland. Sixty previously alcohol-dependent drinkers provided data on determinants of problematic drinking. Mobile phone delivered EMA provided patterns of day-to-day changes in stopping, starting and switching to other substances. Each participant has a unique pattern of behaviour which can be, in principle, precisely tailored to in behavioural interventions.

**Discussion:** N-of-1 design and recent technology developments have great potential to advance our understanding of human behaviour and to apply personalised interventions tailored to current patterns of predictor and outcome variables. With raising importance of the technology use across the lifespan, health psychologists are now able to conduct precision behaviour change studies.



# SYMPOSIUM: Medication adherence in chronic illness: theory, methods and intervention development

14:00 - 15:30

Anderson

Hannah Durand

14:00 - 14:15

## Assessing theoretical predictors of adherence for resistant hypertension using direct and indirect adherence measures

H. Durand<sup>1</sup>, P. Hayes<sup>1</sup>, B. Harhen<sup>1</sup>, A. Conneely<sup>1</sup>, D. Finn<sup>1</sup>, M. Casey<sup>1,2</sup>, A. Murphy<sup>1,3</sup>, G. Molloy<sup>1</sup>

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<sup>2</sup>University of Limerick, Ireland

<sup>3</sup>Health Research Board Primary Care Clinical Trials Network, Ireland

**Background:** The current study examined theoretical predictors of long-term medication adherence (i.e., treatment-related beliefs, coherence of beliefs from experience with medication, habit strength and pill burden) for patients with apparent treatment-resistant hypertension (aTRH) in primary care, using a composite adherence score derived from direct and indirect measures (i.e., prescription refill, self-report, and bioanalytical assays of urine).

**Methods:** A cross-sectional design was used. Individual aTRH patient records were screened for prescription refill adherence. Patients provided a urine sample for adherence screening and completed a battery of psychometric scales, including two self-report adherence measures (N = 204). Convergence of adherence measures was assessed, a composite adherence score was calculated, and hierarchical multiple regression was used to examine the role of theoretical predictors of adherence.

**Findings:** Non-adherence estimates ranged from 20.3–41.1%, depending on the assessment method used. Associations among adherence measures were weak to moderate ( $p=.00-.53$ ). Medication-taking habit strength was the strongest predictor of adherence, explaining 19% incremental variance in adherence beyond treatment-related beliefs. Beliefs and coherence did not predict adherence, even for patients with weaker habits. Pill burden significantly moderated the effect of habit strength on adherence; stronger medication-taking habits were associated with better adherence if patients were prescribed fewer medications.

**Discussion:** Associations among unique adherence measures were weak overall, providing further evidence that multiple measures are needed to accurately assess adherence. Habit strength is a key predictor of adherence for chronic conditions. Both habit strength and pill burden represent important targets for intervention to improve long-term medication adherence.

14:15 - 14:30

## Socio-cognitive predictors of adherence to oral diabetes medication

S. Vluggen<sup>1</sup>, C. Hoving<sup>1</sup>, N. Schaper<sup>2</sup>, H. de Vries<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>Maastricht University Medical Centre, Netherlands

**Background:** Most studies reporting on diabetes medication adherence prevalences report suboptimal adherence prevalences (below 80%, ranging from 36-93%). Besides the attenuation of positive treatment effects, non-adherence can have severe consequences on disease progression. As socio-cognitive variables are known to explain a substantial amount of the variance in adherence to physical activity and healthy eating, it is important to investigate its role in medication adherence.

**Methods:** A longitudinal survey study was conducted to identify socio-cognitive predictors of adherence to oral diabetic medication. The PROMAS and MARS-5 were used to identify medication adherence and for mutual comparison, and socio-cognitive predictors were derived from the I-Change Model. Data was analyzed using basic analysis methods multiple regression analysis.

**Findings:** 366 participants completed the baseline assessment and 250 the six months follow-up assessment. At baseline, according to the PROMAS and MARS-5, respectively 50% and 91% adhered to their medication. Adherence was significantly higher in females and older participants. When using the PPROMAS as dichotomized outcome measure (non-adherent vs. adherent participants) the final regression model could explain 30% of the variance in adherence behaviour, with self-efficacy, age and gender as significant associates of adherence. Longitudinal data-analyses is currently being completed.

**Discussion:** Various instruments used to assess medication adherence, yield divergent results. MARS-5 results show highly skewed results to adherence, which is in line with previous research. Self-efficacy should be targeted in tailored interventions which aim to increase adherence. It is known that self-efficacy to adhere to treatment strategies is lower in situations when routine is compromised.

14:30 - 14:45

## Smartphone apps for improving medication adherence in hypertension: patients' perspectives

E. Morrissey<sup>1</sup>, M. Casey<sup>1</sup>, L. Glynn<sup>2</sup>, J. Walsh<sup>1</sup>, G. Molloy<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway., Ireland

<sup>2</sup>University of Limerick, Ireland

**Introduction:** Digital interventions, such as smartphones apps, are becoming an increasingly common way to support medication adherence and self-management in chronic conditions. It is important to investigate how patients feel about and engage with these technologies. The aim of this study was to explore patients' perspectives on smartphones apps to improve medication adherence in hypertension.

**Method:** This was a qualitative study based in the West of Ireland. Patients with hypertension were purposively sampled. Twenty four engaged in focus groups and three participated in semi-structured interviews. Thematic analysis was carried out on the data.

**Findings:** Three major themes were identified: development of digital competence, rules of engagement and sustainability.

**Discussion:** Overall patients were divided in their views on using a smartphone app to self-manage their hypertension. Many could see the benefit of a medication reminder and felt that self-monitoring their BP would be empowering in terms of their understanding of the condition and in interactions with their GPs. However there were concerns around increasing health-related anxiety and doubts about the sustainability of this technology over time.

14:45 - 15:00

## Views of people with type 2 diabetes about a message system to support medication adherence

Y.K. Bartlett<sup>1</sup>, N. Newhouse<sup>2</sup>, H. Long<sup>1</sup>, A. Farmer<sup>2</sup>, D. French<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>University of Oxford, United Kingdom

**Background:** Many people with type 2 diabetes do not take their oral medications as prescribed, increasing their risk of complications. Current interventions to promote adherence are complex and ineffective. If acceptable to people with diabetes, text messages could provide a solution. In a previous study, experts in health psychology and healthcare professionals developed ~300 text messages to deliver promising behaviour change techniques (BCTs). This study reports the views of people with type 2 diabetes concerning the acceptability of these messages based on BCTs, and the concept of a text messaging system to support adherence.

**Methods:** The proposed system and previously generated text messages were discussed with five focus groups of people with type 2 diabetes (n=23). Focus groups were analysed thematically.

**Findings:** Although many participants described managing their medication well, all participants had experience of forgetting to take medication, or making changes to their regimen. The theme 'Us and them (who is the system for?)' highlighted that those with high confidence in their ability to adhere were keen to make a distinction between themselves and those who did not adhere. The theme 'Preaching to the converted' indicated that BCTs were seen as more acceptable if they did not replicate something participants were already doing.

**Discussion:** These findings have implications for engaging people with a medication adherence system. By using messages defined by specific BCTs, future studies can investigate which messages might be acceptable to different patient groups e.g. those not currently using a particular BCT.

15:00 - 15:15

## Reframing asthma and inhaled corticosteroids (ICS) to modify treatment beliefs: an online intervention RCT

C.B. Katzer<sup>1</sup>, V. Wileman<sup>1</sup>, A. Chan<sup>2</sup>, S.J.C. Taylor<sup>3</sup>, R. Horne<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

<sup>2</sup>UCL, United Kingdom

<sup>3</sup>Queen Mary University of London, United Kingdom

**Background:** ICS nonadherence contributes to poor asthma control. Patients' perceptions of asthma and ICS are important determinants, with nonadherence associated with doubts about ICS-necessity and concerns about harm. Our intervention, the Balance Model (BM), applies self-regulatory theory to communicate a common-sense rationale for ICS-necessity and address ICS-concerns. This online, analogue study examined its effect on ICS-beliefs and adherence in people without asthma (asthma-naïve - a proxy for newly-diagnosed patients) and people with asthma.

**Methods:** We randomised 503 adults reporting asthma (asthma) and 388 (asthma-naïve) to: Control (NHS-information) vs BM-text (matched NHS format) vs BM-video. Necessity-Concerns medication beliefs (BMQ), adherence (MARS) and intentions were assessed post-intervention and at 2-week follow-up.

**Findings:** Asthma-naïve: BM-video participants reported higher necessity beliefs ( $F(2,252)=7.1, p=.001$ ) and lower concerns ( $F(2,252)=9.6, p<.0001$ ) than controls. Both BM-text and BM-video groups reported higher intentions to adhere than controls, post-intervention ( $F(2,252)=23.2, p<.0001$ ). All effects were maintained at follow-up.

**Asthma:** Medication beliefs group differences were non-significant. However, BM-video participants reported increased necessity beliefs post intervention ( $t(150)=-2.54, p=0.012$ ) and at follow-up. BM-text participants reported lower concerns ( $t(151)=2.19, p=0.029$ ) post intervention only. BM-text participants reported higher adherence at follow-up compared to controls ( $t(230)=-2.42, p=0.016$ ).

**Discussion:** The BM, especially the video format, could help newly-diagnosed people develop a common-sense understanding of asthma and ICS, consistent with medical evidence, motivating adherence. The BM also changed ICS-beliefs and reported adherence in the asthma-group but the effects were smaller, equivalent to NHS-information. This could be due to more 'fixed' representations based on experience, suggesting that change requires more intensive, personalised approaches.

**SYMPOSIUM: Focusing on fidelity:  
improving methodology of intervention  
fidelity assessment within behaviour  
change intervention research**

14:00 - 15:30

Kirwan

Elaine Toomey

14:00 - 14:15

## Surveying knowledge, practice and attitudes toward intervention fidelity within trials of health behaviour change interventions

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**Background:** Intervention fidelity (the degree to which interventions are implemented as intended) is crucial for accurate interpretation of intervention effectiveness. Fidelity is often poorly addressed in trials of complex health behaviour change interventions. The reasons for this are unclear, and information regarding the use of methods to enhance and assess fidelity in these trials remains insufficient. This study aimed to explore the knowledge, practice and attitudes toward intervention fidelity amongst researchers, triallists and healthcare professionals.

**Methods:** An online survey consisting of closed- and open-ended questions exploring Demographics, Fidelity Knowledge, Practice and Attitudes was conducted with an opportunistic sample of individuals with experience of direct involvement in trials of health behaviour change interventions.

**Findings:** Data from 264 participants representing 15 countries were analysed. 69.7% of participants were familiar with the term 'intervention fidelity'. Self-reported understanding of fidelity was  $5.84 \pm 2.26$  (1= poor, 10= excellent). 68.9% had previously used strategies to assess (e.g. provider self-report) fidelity. Participants ranked 'Reporting the use of fidelity strategies' as  $2.93 \pm 1.05$  (1= never reported, 5= always reported). Poor knowledge/understanding was the most commonly cited barrier to intervention fidelity. 89.7% would avail of specific training in this area.

**Discussion:** Despite good awareness of intervention fidelity and its importance, poor knowledge and understanding appears to be limiting how it is addressed in complex healthcare intervention trials. Clarification of terminology and components would facilitate better understanding. A discrepancy between participants' use of fidelity strategies and subsequent reporting raises concerns around inadequate fidelity reporting, and a need for further training was identified.



14:15 - 14:30

## Considering the quality of fidelity measures: The Promoting Independence in Dementia intervention

H. Walton<sup>1</sup>, I. Tombor<sup>1</sup>, A. Spector<sup>1</sup>, S. Michie<sup>1</sup>

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**Background:** Measuring fidelity of delivery effectively requires the development and use of high-quality measures. This presentation will consider the psychometric and implementation qualities of fidelity measures and the pros and cons in a study which aimed to measure fidelity of delivery of the Promoting Independence in Dementia (PRIDE) intervention. PRIDE is a manual-based tailored intervention delivered to people with dementia and supporters over three sessions by dementia advice workers.

**Methods:** This was a longitudinal observational study conducted in England. Fidelity of delivery was measured using audio-recording ratings and self-report from dementia advice workers (n=12) and participants (n=34). Fidelity checklists for each session were developed specifically for this study and adjusted to be acceptable for providers/researchers or participants to complete. All intervention sessions were audio-recorded and recordings (n=24 sets) were randomly selected for transcription. Sessions were double-coded until inter-rater agreement (>.61 weighted kappa) was achieved. Descriptive statistics were used to analyse fidelity of delivery.

**Findings:** Response rates were high (audio-recordings: n=72, 77.4%; provider: n=75; 80.7%; participant: n=59, 63.4%). Preliminary results from audio-recordings (n=55 in total) indicated moderate fidelity (S1: 69.2%, S2: 57.7%, S3: 54.9%), whereas provider (S1: 85%, S2: 84.3%, S3: 86.5%) and participant (S1: 89.8%, S2: 90.1%, S3: 92.5%) self-report indicated high fidelity. Final fidelity results will be presented.

**Discussion:** Preliminary results indicate that PRIDE was delivered with moderate fidelity of delivery. Findings demonstrate that it is possible to consider both implementation and psychometric qualities when measuring fidelity of complex interventions.

14:30 - 14:45

## Evaluating intervention fidelity in a national diabetes prevention programme

E. Cameron<sup>1</sup>, D. French<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

**Background:** NIH Behaviour Change Consortium guidelines recommend fidelity is enhanced and evaluated across five domains: design, training, delivery, receipt, and enactment. We are evaluating these domains in a national behaviour change programme for people at high risk of developing type 2 diabetes in England. The aim of the current study is to assess fidelity in intervention design by describing the behaviour change content of clinical and service specifications (i.e. what commissioners say should be delivered) and comparing with the specified behaviour change content across four provider organisations (i.e. what providers plan to deliver).

**Methods:** Document analysis including coding and comparison of NHS service specification and NICE diabetes prevention guideline (indicating what should be delivered), and operational programme specifications (indicating what providers plan to deliver). Documents were coded using the Behaviour Change Technique Taxonomy v1.

**Findings:** Eight different behaviour change techniques (BCTs) were identified in the service specification and 18 in the NICE guideline. Five were common to both documents, including types of social support, goal setting, graded tasks, and information provision. The four programme manuals contained between 16 and 41 different BCTs. Of 21 unique BCTs specified by NHS and NICE, providers included between 52% and 86% in intervention designs.

**Discussion:** Findings indicate issues for fidelity to clinical requirements at the earliest stage, i.e. what providers intend to deliver. They provide a baseline description for evaluating training and delivery against what service commissioners require and what is planned. This study highlights concerns for researchers evaluating large-scale interventions as external evaluators.

14:45 - 15:00

## Intervention fidelity of a provider delivered walking intervention in primary care: A mixed methods study

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<sup>6</sup>University of Manchester, United Kingdom

**Background:** Intervention fidelity remains under-researched in the physical activity literature, particularly for interventions delivered by healthcare providers in clinical settings. The present pilot study aimed to examine multiple aspects of fidelity of a walking intervention delivered by healthcare providers in primary care.

**Methods:** Eight primary healthcare providers (practices nurses and healthcare assistants) delivered a theory-based walking intervention featuring techniques to improve self-efficacy and self-regulation to 63 patients. Multiple aspects of intervention fidelity were assessed, in line with the NIH Behaviour Change Consortium Framework. Intervention sessions were audio-recorded, and fidelity to specified components and techniques was quantified using a standardised checklist. A qualitative study of eight providers and 12 patients was conducted to assess experience of delivery, receipt and enactment from provider and patient perspectives; interviews were analysed using Framework Analysis.

**Findings:** Overall, fidelity of delivery was 78%. Adherence to the protocol varied across providers (range 36-91%), components and techniques. Providers delivered the intervention in less time than specified in the protocol. Understanding of, and engagement with techniques, to improve self-efficacy was generally poorer than for planning techniques.

**Discussion:** Although generally high levels of fidelity were demonstrated, providers and techniques level differences were identified which may impact on delivery and receipt of health behaviour change interventions. Awareness of provider level factors and types of techniques associated with poor fidelity may be useful in the development and implementation of future interventions.

**SYMPOSIUM: Psychosocial and  
neuropsychological aspects in cardiac  
patients and family members:  
Innovations in assessment and therapy**

14:00 - 15:30

Larmor

Edward Callus

14:00 - 14:15

## Heart disease patients: psychological and neuropsychological screening in a rehabilitative setting

A. Pierobon<sup>1</sup>, M. Sommaruga<sup>2</sup>, C. Vailati<sup>1</sup>, A. Radici<sup>2</sup>, C. Pavesi<sup>3</sup>, M. Monelli<sup>4</sup>, A. Giardini<sup>1</sup>

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<sup>4</sup>ICS Maugeri SpA SB IRCCS, Sub Acute Care Unit, Camaldoli (MI), Italy

**Background:** In heart chronic diseases, patients have frequently clinical comorbidities that may affect multidisciplinary rehabilitation delivery and outcome. Aims of the study is to describe psychological and neuropsychological comorbidities in patients with Chronic Heart Failure (CHF) in a rehabilitative setting.

**Methods:** CHF young old and old old inpatients admitted at ICS Maugeri Spa-SB, IRCCS, Institute of Montescano (PV) and Camaldoli (MI) for cardiac rehabilitation underwent an assessment for depressive and anxious symptoms, cognitive impairment, executive functions and self-reported adherence. Instruments taken into account are: Hospital Anxiety and Depression Scale (HADS), Geriatric Depression Scale (GDS), Addenbrooke's Cognitive Examination Revised (ACE-R), Frontal Executive Battery (FAB), Trail Making Test- B (TMT-B), phonological fluency (FAS), positive affectivity and self-reported nonpharmacological adherence.

**Results:** CHF patients (n=69, 73.2±6,7 years old) reported: anxious and depressive symptoms (40-50%); amnesic and non-anamnestic cognitive impairment: significant pathological performance in comparison with normative group ( $p < 0.5$ ) in ACE-R subtest attention and orientation (8,7%), fluency (17.4%) and memory (10.15%), in FAB (56.5%), in TMT-B (53.6%) and in FAS (18.8%); an average level of satisfaction and positive affectivity and good adherence to the treatment. They struggled with disease acceptance (52.3%, at all), nevertheless they seem to accept better disease limitations (50.7%, enough). The relationship between nonpharmacological adherence, depression, anxiety and cognitive impairment should be investigated also in relations to some relevant clinical variables.

**Conclusion:** in CHF patients, focusing on psychological and neuropsychological aspects related to nonpharmacological adherence may enhance the possibility of implementing tailored cardiovascular rehabilitation programs.

14:15 - 14:30

## Psychosocial screening and evaluation of hospitalized adults with congenital heart disease

E. Callus<sup>1</sup>, S. Pagliuca<sup>1</sup>, E. Quadri<sup>1</sup>, E.G. Bertoldo<sup>1</sup>, M. Carminati<sup>2</sup>, R. Tramarin<sup>3</sup>, A. Giamberti<sup>4</sup>, M. Chessa<sup>2</sup>

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<sup>4</sup>Surgical GUCH Unit, IRCCS Policlinico San Donato, Italy

**Background:** the objective of this protocol (initiated in Dec 2017) is to explore the psychosocial variables of adults with congenital heart disease, from the moment before the cardiac intervention (cardiac surgery or catheterisation) until the moment just before discharge in cardiac rehabilitation.

**Methods:** 9 patients (2 females, average age of 53 ranging from 34 to 66 years, 4 mild, 4 moderate and 1 severe complexity) were evaluated when it comes to psychosocial status, lifestyle, quality of life (satisfaction with life scale), health perception (EuroQoL), anxiety and depression (Hospital Anxiety and Depression Scale) before the cardiac intervention/catheterisation (t0). Health perception, anxiety and depression were also measured after the intervention (t1) and at the end of cardiac rehabilitation (t2).

**Findings:** 4 patients were employed and 2 of these reported that the condition affected their ability to work. Two patients lived on their own and all of them reported having adequate support. Two patients made regular use of psychotropic drugs and another 2 made sporadic use of them. There was a progressive improvement in average health perception (scores range from 0-100) during the different times (54 (t0), 56 (t1), 68 (t2)). Anxiety and depression resulted in the norm except for one patient who reported moderate anxiety (t0 e t1), and mild depression (t1).

**Discussion:** These initial results confirm the importance of psychosocial screening of this population during hospitalization. More data is required to identify possible risk and protective factors when it comes to psychosocial wellbeing.

14:30 - 14:45

## Emotion Regulation and Well-being in Cardiac Patients and Their Partners: A Prospective Dyadic Study

E. Karademas<sup>1</sup>

<sup>1</sup>University of Crete, Greece

There is evidence that emotion regulation impacts adaptation to chronic illness and affects patients' well-being. Given that also partners' reactions often affect patients' health, the aim of this prospective study was to examine the dyadic effects of two crucial emotion regulation strategies (i.e., emotion suppression and reappraisal) of cardiac patients and their partners on their physical and psychological well-being. Furthermore, we examined whether another important for adaptation to illness variable, i.e., illness representations of personal control over illness, mediated the effects of emotion regulation on well-being. One hundred and four patients with a cardiovascular disease and their partners participated in the study. Emotion regulation was assessed at baseline; representations of control were assessed two months later; well-being four months later. The Actor-Partner Interdependence Mediation Model was used to examine the dyadic mediation effects. Structural equation modeling was applied to run these analyses. Patient representations of personal control mediated the impact of patient reappraisal and partner suppression on patient physical and psychological well-being. Partner personal control mediated the effect of own emotion suppression on patient physical well-being. Additionally, patient reappraisal directly predicted own psychological and partner physical well-being, while partner reappraisal predicted own psychological well-being. These results underline the strong interaction between cardiac patients' and their partners' self-regulation systems, and the need to integrate theories regarding self-regulation in illness with theories concerning couples' adaptation to stressful conditions. In this way, we will be able to form a clearer picture of the trajectory of couples' adaptation to illness, and especially cardiac diseases.

14:45 - 15:00

## PTSD among cardiac patients' caregivers: Individual and dyadic explorations

N. Vilchinsky<sup>1</sup>, K. Fait<sup>1</sup>, R. Dekel<sup>1</sup>

<sup>1</sup>Bar-Ilan University, Israel

**Background:** In recent years, much scientific attention has been devoted to exploring the possibility that illnesses or injuries might be regarded as causes of post-traumatic stress disorder (PTSD). In addition, it is well established that a patient's partner can be deeply affected by the traumatizing nature of the patient's illness. Yet, only a handful of studies to date has focused on post-traumatic stress symptoms among partners of cardiac patients. The current talk will focus on recent findings regarding the prevalence over time of PTSD among cardiac caregivers, as well as possible individual and dyadic risk factors for it. The predictive role of Fear of Illness Progression will be highlighted.

**Methods:** In this lecture I will present preliminary findings from our prospective, longitudinal study, including 155 couples, in which one partner have had a recent acute cardiac event. PTSD was measured three and six months post the coronary event. Putative predicting factors were measured at hospitalization and three months later.

**Findings:** Prospective dyadic findings detected that for both patients and caregivers, each partner's fear of illness progression was associated with his/her own levels of PTSD. Dyadic effects were also traced for female caregivers, which were found to be more susceptible to patients' fears than male patients were.

**Discussion:** Applying the dyadic paradigm in the context of PTSD and cardiac illnesses is critical in order to better understand caregivers' adjustment processes. Ultimately, this kind of comprehensive understanding will be translated into effective interventions.



15:00 - 15:15

## Best practice on psychological activities in cardiovascular prevention and rehabilitation: Position paper

M. Sommaruga<sup>1</sup>, E. Angelino<sup>2</sup>, P. Della Porta<sup>3</sup>, M. Abatello<sup>4</sup>, G. Baiardo<sup>5</sup>, b. Gianluigi<sup>6</sup>, O. Bettinardi<sup>7</sup>, E. Callus<sup>8</sup>, C. Ciraci<sup>9</sup>, F. Lupo<sup>10</sup>, O. Omodeo<sup>11</sup>, C. Rizza<sup>12</sup>, P. Michielin<sup>13</sup>, M. Ambrosetti<sup>14</sup>, R. Griffo<sup>15</sup>, R. Pedretti<sup>11</sup>, A. Pierobon<sup>16</sup>

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**Introduction:** The working group of Psychologists of the Italian Association for Cardiovascular Prevention, Rehabilitation and Epidemiology updated the Italian psychological guidelines published in 2003 to elaborate a document on the best practice in daily psychological activities in CPR based on efficacy, effectiveness and sustainability.

**Methods:** analysis of literature from 2005 to 2018, integrated by the clinical experience of psychologists working in hospitals and structures which are accredited scientifically.

**Results:** The evidence of associations between depression, anxiety, social factors, stress, personality and illness onset/outcome and coronary heart disease were confirmed. Some evidence for an association between depression, social factors and illness outcome emerged particularly for chronic heart failure. Some positive psychological variables [such as optimism] resulted as being associated to illness outcome. There is also an availability of evidence regarding the impact of psychological activities on new indications in cardiac rehabilitation (pulmonary hypertension, grown up congenital heart, end-stage heart failure, implantable cardioverter-defibrillator and mechanical ventricular assist devices wearers, frail and older/oldest patients, end-of-life care). Several evidences are also reported on patients' caregivers. The Panel divided evidence based psychological interventions in a) low intensity (counselling, psycho-education, self-care, self-management, telemedicine, self-help; b) high intensity (individual, couples and or family and group psychotherapy, such as stress management), based on cognitive behaviour therapy, interpersonal therapy, short-term psycho-dynamic therapy.

**Conclusions:** the data available enriches the operative tools inherent to the psychological activities in cardiac and preventive rehabilitation, directing the choice of interventions which are evidence based and which have at least a minimum standard.

# SYMPOSIUM: Better together? Regulating health within close relationships

14:00 - 15:30

Dillon

Janina Lüscher & Corina Berli

14:00 - 14:15

## Synchrony of physical activity and sedentary behaviour in couples

J. Keller<sup>1</sup>, T. Pauly<sup>2</sup>, D.H. Hohl<sup>1</sup>, N. Knoll<sup>1</sup>, C. Hoppmann<sup>2,3</sup>

<sup>1</sup>Freie Universität Berlin, Germany

<sup>2</sup>Department of Psychology, University of British Columbia, Canada

<sup>3</sup>Centre for Hip Health and Mobility, University of British Columbia, Canada

**Background:** Research has shown that romantic partners influence each other's health behaviours. Not much is known about the time-based co-occurrence (i.e. synchrony) of physical activity and sedentary time. This study examined between-partner synchrony in moderate-to-vigorous intensity physical activity (MVPA) and sedentary behaviour using parallel accelerometer data from romantic partners.

**Methods:** Synchrony was operationalized as partners' hour-by-hour covariation of time spent in MVPA or sedentary behaviour. Using a 7-days accelerometer assessment from the baseline assessment of a larger randomized control trial with N=338 community-dwelling couples (aged 18-80), MVPA and sedentary synchrony slopes were analysed using multilevel models. Synchrony parameters were linked to time (e.g., linear and quadratic hour trend throughout the day, weekday vs. weekend day), demographic (e.g., time spent together), and behavioural variables (e.g., individual MVPA and sedentary levels).

**Findings:** Hourly MVPA (M=0.36, SD=0.15) and sedentary levels (M=0.35, SD=0.16) were positively linked between partners. Across the 7 accelerometer wear days, MVPA and sedentary synchrony were higher in the morning and evening as well as on the weekend. Furthermore, MVPA and sedentary synchrony were higher when partners spent more time together. MVPA synchrony was linked with higher individual MVPA and sedentary levels, whereas sedentary synchrony was only related to higher individual MVPA levels.

**Discussion:** This study applied a novel approach to analyse synchrony in couples and provides further empirical support that health behaviours are linked within couples in an everyday life context. As synchrony is not necessarily equivalent to joint activity, future studies should also assess location-based data from both partners.

14:15 - 14:30

## Enabling or cultivating? Findings from a dyadic study in physical activity context

A. Banik<sup>1</sup>, M. Boberska<sup>1</sup>, M. Kruk<sup>1</sup>, K. Horodyska<sup>1</sup>, A. Luszczynska<sup>1,2</sup>

<sup>1</sup>University of Social Sciences and Humanities, Poland

<sup>2</sup>University of Colorado at Colorado Springs, United States

**Background:** The effects of self-efficacy and social support on health outcomes are well established. However, it is unclear if self-efficacy is prompting support receipt (cultivation hypothesis) or whether social support receipt is prompting self-efficacy (enabling hypothesis). Furthermore, there is no evidence for either cultivation or enabling processes in the context of parent-child dyads.

**Methods:** Data were collected among parent-child dyads (N = 596) at baseline (T1) and at 7-8 months follow-up (T2). Interviews with children were conducted to measure self-efficacy, social support provision from parents, and their physical activity (PA). Parents reported their perceptions of child's self-efficacy and parental social support provision. Enabling and cultivation hypotheses were tested with mediation analyses.

**Findings:** Analyses conducted for children-variables only showed that the enabling effect of child's perception of parental social support provision on child's self-efficacy and cultivation effect of child's self-efficacy on child's perception of parental social support provision was confirmed. When only parental predictors were accounted for, cultivation effect was supported for the parental perception of child's self-efficacy on parental social support provision.

**Discussion:** Both enabling and cultivation hypotheses were supported. Importantly, if parents perceived their children as self-efficacious, they provided them with more parental social support and thus children were more physically active. PA facilitating interventions for children should emphasize the role of parental perceptions of child self-efficacy, as it triggers parental support.

14:30 - 14:45

## Who benefits from social support? Dyadic effects of couples' daily support provision on well-being

C. Berli<sup>1</sup>, U. Scholz<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

**Background:** A vast amount of literature documents the role of social support in alleviating recipients' distress. Less studied is the phenomenon that providing support may entail a benefit for the provider itself. In this study we investigated the effects of providing social support on daily well-being within romantic couples.

**Methods:** One-hundred twenty one heterosexual romantic couples participated in this dyadic daily diary study. Both partners reported on the provision of activity-specific social support, positive and negative affect, relationship satisfaction and feeling of closeness in electronic end-of-day diaries across 28 consecutive days.

**Findings:** Dyadic data analyses based on the Actor-Partner-Interdependence Model indicated that men and women reported more own positive affect and less negative affect on days they provided more social support than usual. Moreover, providing support to the partner was also associated with more own and partners' relationship satisfaction and feelings of closeness that same day.

**Discussion:** Shifting the focus away from the recipient to examine beneficial effects of social support in providers is highly relevant. The present findings suggest that the provision of daily social support in couples can enhance the provider's feelings of well-being, and promote satisfaction and closeness at the couple level. Providing social support may thus also serve the function of relationship maintenance. Future research should investigate the underlying mechanisms.

14:45 - 15:00

## Spill-over effects of volitional self-regulation: A dyadic perspective on the Health Action Process Approach

J. Lüscher<sup>1</sup>, C. Berli<sup>1</sup>, U. Scholz<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

Regulating health behavior change often occurs in a dyadic context of close relationships. However, dyadic approaches to standard health behavior change models have not been investigated in daily life. Therefore, this study aimed at investigating volitional processes of the Health Action Process Approach for two different health behaviors within a dyadic context of romantic couples. We specifically tested whether day-to-day volitional self-regulation predicted one's own and one's partner's number of cigarettes smoked (Study 1) and physical activity (Study 2). In two dyadic intensive longitudinal studies (Study 1: 83 dual-smoker couples intending to jointly quit smoking; Study 2: 61 overweight couples intending to become physically active), both partners of heterosexual couples independently reported on intention, self-efficacy, action planning and action control in end-of-day diaries. Additionally, both partners self-reported on their smoking behavior in Study 1 and wore accelerometers to objectively assess daily moderate-to-vigorous physical activity (MVPA) in Study 2. Across both studies, dyadic intensive longitudinal analyses based on the Actor-Partner Interdependence Model indicated that one's own volitional self-regulation predicted better own health behavior (less cigarettes smoked and more MVPA). Partner's action control and intention, but not action planning additionally predicted better own health behavior across the two studies. Partner's self-efficacy was only related to less own smoking but not more own MVPA. Findings emphasize that volitional self-regulation is not only relevant for the individual itself, but spill also over to the partner. This highlights the need to specify couple-level processes involved in health behavior change, and to consider the social context.

# SYMPOSIUM: You only live once: Youth culture and health.

14:00 - 15:30

McMunn

Adriana Baban

14:15 - 14:30

## Cultural and health factors associated with early sexual initiation

L. Burke<sup>1</sup>, S. Nic Gabhainn<sup>1</sup>, C. Kelly<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

**Background:** Adolescence is a complex life stage when young people are developing physically, emotionally, socially as well as sexually. Due to developmental and behavioural factors adolescents who initiate sexual intercourse early may be at an increased risk of adverse sexual health outcomes at the time of first sex and later in life. Little is known about the specific correlates of early sexual initiation among adolescents in Ireland. This research aims to identify cultural, lifestyle and health factors specific to young people that may be associated with early sexual initiation.

**Methods:** The relationship between a number of facets of youth culture and health were explored within the context of sexual initiation. Cross-sectional data on peer and family relationships, school experience, health and risk behaviours were collected through the 2014 Health Behaviour in School-aged Children Ireland study from 879 sexually active 15-17 year olds. A series of multiple regression analyses were conducted.

**Findings:** The socio-demographic and lifestyle factors measured were a stronger predictor of age of sexual initiation among girls than boys. Risk behaviour initiation was significantly related to age of sexual initiation for adolescents, while alcohol use/drunkenness and unhealthy food consumption was significant among girls only. Family support and number of male friends were significant predictors for boys only.

**Discussion:** The study provides an insight into the wider social and lifestyle factors influencing Irish adolescent sexual initiation and provides a foundation for the development of behaviour change strategies and policies aimed at reducing negative health, well-being, educational and economic outcomes.



14:30 - 14:45

## Romantic attraction and psychosomatic symptoms in adolescents from eight European countries

A. Költő<sup>1</sup>, S. Nic Gabhainn<sup>2</sup>

<sup>1</sup>Eötvös Loránd University, Hungary

<sup>2</sup>National University of Ireland Galway, Ireland

**Background:** Adolescents attracted to same- (SGA) or both-gender partners (BGA) are more vulnerable to various health risks than their opposite-gender (OGA) or not attracted (NA) peers. According to the minority stress hypothesis, this health inequality may be attributed to the exposure of SGA and BGA adolescents to rejection and discrimination, which negatively affects their hypothalamic–pituitary–adrenal axis regulating stress response. This study compared the frequency of 15-year-old adolescents' psychological and somatic symptoms, and their risk of having multiple health complaints, across self-reported gender-related romantic attraction.

**Methods:** Adolescents from eight European countries that participated in the 2013/2014 Health Behaviour in School-aged Children (HBSC) cross-national study (N = 14,206) were asked whether they have been in love with opposite-, same-, both-gender partners, or have not experienced love. Their health status was assessed using a 8-item psychosomatic symptoms checklist.

**Findings:** Both SGA and BGA adolescents were found to have higher scores on the symptom checklist than OGA or NA youths ( $F(3) = 106.24, p < .001$ ). They also had higher risk for multiple health complaints than OGA peers (adjusted odds ratio [AOR] = 1.130 for SGA and 1.441 for BGA), while NA youth had significantly lower risk (AOR = 0.792). These results were consistent across countries.

**Discussion:** These findings demonstrate that same- and both-gender attracted adolescents are at higher risk of frequent psychosomatic health complaints than their opposite-gender attracted or not attracted peers. Our results indirectly support the minority stress hypothesis, and underpin the importance of addressing sexual minority adolescents' mental and somatic health problems.

14:45 - 15:00

## An examination of adolescents' beliefs and perceived injunctive norms around peer drinking behaviours over time

K. Fox<sup>1</sup>, C. Kelly<sup>1</sup>, M. Molcho<sup>1</sup>

<sup>1</sup>National University of Ireland Galway, Ireland

**Background:** Drinking prevalence increases with age; with a notable rise at the age of 13 years. Examining concurrent changes in adolescent opinions around alcohol use and perceived acceptability of drinking can help us to understand what influences changes in drinking behaviours during early and mid-adolescence. This study investigates changes in adolescent alcohol drinking behaviours, beliefs and perceived injunctive norms over time.

**Methods:** A repeated measures study design was employed with pupils from first and second year classes in post-primary schools in Ireland at the beginning (T1) and end (T2) of an academic year. Mean age of participants at T1 (N=407) was 13.4 years. Analyses were conducted utilising Chi Square test of independence and McNemar's test for proportion differences over time within a paired sample.

**Findings:** The most popular belief as to why respondent's peers drink alcohol was 'to look cool in front of friends' (T1 84%, T2 86%). The least likely reason reported was 'to relax' (T1 21%, T2 32%). At T2, drinkers were more likely to report boredom ( $P<0.05$ ) or the desire to feel more confident ( $P<0.001$ ) as reasons for their peers drinking behaviours; an association which is not evident at T1. Differences over time are also observed for reported approval of peer drinking behaviours ( $P<0.05$ ) and perceived injunctive norms of close friends ( $P<0.001$ ).

**Conclusion:** Findings suggest that when developing interventions to prevent early alcohol initiation, consideration should be given to changes in adolescent beliefs and injunctive norms which emerge alongside changes in drinking behaviours during early to mid-adolescence.

15:00 - 15:15

## Children who fight: the international context

M. Molcho<sup>1</sup>, K. Colette<sup>1</sup>, A. Gavin<sup>1</sup>, M. Callaghan<sup>1</sup>, S. Nic Ganhainn<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

**Background:** Physical fighting is the most common type of violence among youth and it is associated with increased risk for poor life satisfaction, school perceptions and relationships with parents and peers and for engaging with risk behaviors. As such, it is important to study the prevalence, trends and predictors to this behaviour.

**Methods:** This paper presents data from the Health Behaviour in School Aged Children (HBSC) studies in 30 countries in the years 2002, 2006 and 2010, data from 42 countries collected in 2014, and an in-depth analysis of the Irish HBSC data from 2001. The HBSC data is a self-administered survey collected from nationally represented sample of 11,13 and 15 year olds school children in a countries in Europe and North America every 4 years. Data in Ireland is collected from 9-18 year olds, with a sample size of 13,611 obtained in the 2014 cycle.

**Findings:** Overall, the prevalence of fighting has decreased from 14% in 2002 to 12% in 2010. However, the decrease was only found in 15 out of the 30 countries for which time trends were tested. The decrease mainly occurred among 15 year old girls (22/30 countries), with fewest countries reporting decrease in the prevalence of fighting among 11 year olds boys (12/30 countries. While in most countries fighting is less common among older adolescents, in Ireland, fighting remains consistent across all age groups.

**Discussion:** While fighting, overall, is not a prevalent behaviour, its outcomes are concerning, and its predictors deserve further investigation.

**ROUNDTABLE: Health Psychology  
practice in Europe and other countries  
represented in the EHPS: Moving  
forward together**

9:00 - 10:30

O'Flaherty

Anne Marie Plass

## Health Psychology practice in Europe and other countries represented in the EHPS: Moving Forward Together

A.M. Plass<sup>1,2</sup>, J. Mc Sharry<sup>3</sup>, K. Hamilton<sup>4</sup>, W. Nieuwenboom<sup>5</sup>, A. Kassianos<sup>6</sup>

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**Purpose:** If one were to ask what is Health Psychology (HP) and who are Health Psychologists (HPs), there would be no simple answer. These reflections were drawn from the European Health Psychologist (EHP) December 2017 Special Issue, presenting an overview of the status of Health Psychology in the countries represented in the EHPS with regard to; HP education, HP as an applied profession, legislation around HP and cooperation of HPs with other professionals. Across the 27 participating countries, there appeared to be no global or consistent narrative on who HPs are and what HP is.

**Objective:** In being a specialized and unique field of psychology, it would be helpful to develop a framework of standardized HP skills and competencies. In 2017 Byrne and colleagues encouraged the EHPS to take the lead in promoting a more coordinated approach and standardized international regulation of HP at a European and international level. This roundtable functions as a starting point to further enabling this.

**Rationale:** Since 1978, HP has officially been established as a field within psychology. Yet, the exact disciplinary boundaries defining HP, and the roles and identities held by HPs remain unclear. Consequently, there is much variation in how teaching and training in HP is delivered. This might result in a variation in competencies, hindering (future) global mobility and employability of HPs and the exchange of expertise and knowledge on an international level. Moreover, Health Psychology recently defined HP as a part of (Behavioral) Medicine, rather than a part of psychology

**Summary:** Standardization would contribute to promoting the international recognition of HP curricula within Europe and beyond, warranting the unique identity of HP, improving global mobility of HPs, securing its 'unique selling point', and increasing visibility of the profession. This is especially of importance to guiding training and careers, and improving the further building of HP at an international level. Its paramount to starting this now.

# Health behaviour and chronic disease

9:00 - 10:30

Anderson

Val Morrison

9:00 - 9:15

## Coping with insomnia in prostate cancer: investigating the role of predisposing, precipitating and perpetuating factors

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**Background:** Sleeping problems can increase following the diagnosis and treatment of prostate cancer, however there is disagreement regarding what factors put survivors most at risk of insomnia. This study aimed to investigate the possible role of predisposing, precipitating, and perpetuating factors in insomnia.

**Methods:** Using a cross-sectional design, 3,348 prostate cancer survivors reported experiences of insomnia using the QLQC30 along with their sociodemographic background, health status, and treatment(s) received. The EQ5D-5L and QLQPR25 assessed survivors' overall and prostate cancer-specific health-related quality of life. A hierarchical multiple regression analysis was constructed with three blocks: (1) predisposing factors (e.g. demographics), (2) precipitating factors (e.g. disease extent, treatment), and (3) perpetuating factors (e.g. side effects, psychological well-being).

**Findings:** 19% of survivors reported significant problems sleeping at time of survey completion. The final model accounted for 31% of variance in insomnia scores ( $p < .001$ ). Significant associates of insomnia were: urinary symptoms ( $\beta = .20$ ;  $p < .001$ ), experiencing depression/anxiety ( $\beta = .18$ ;  $p < .001$ ), hormone treatment-related symptoms ( $\beta = .12$ ;  $p = .001$ ), pain ( $\beta = .10$ ;  $p < .001$ ), and bowel symptoms ( $\beta = .056$   $p = .005$ ). Having a lower education and more comorbidities also predicted insomnia.

**Discussion:** Results suggest it is the ongoing physical and psychological effects of prostate cancer and its treatment that put survivors most at risk of insomnia. Findings highlights the need for health care practitioners to treat and manage adverse effects of prostate cancer treatment in order to mitigate the experience of insomnia in survivors.

9:15 - 9:30

## Ultraviolet radiation exposure in people with Xeroderma Pigmentosum: daily diary study

S. Norton<sup>1</sup>, J. Walburn<sup>1</sup>, R. Sarkany<sup>2</sup>, L. Foster<sup>2</sup>, K. Sainsbury<sup>3</sup>, V. Araujo Soares<sup>3</sup>, J. Heydenreich<sup>4</sup>, H.C. Wulf<sup>4</sup>, J. Weinman<sup>1</sup>

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**Background:** Xeroderma Pigmentosum (XP) is a rare genetic condition where the skin is unable to repair ultraviolet radiation (UVR) damage, leading to high skin cancer risk. Management involves limiting exposure to UVR by avoiding going outside during higher-risk times and rigorous photoprotection when outside. This is the first study to examine UVR exposure and photoprotection in people with XP.

**Methods:** Thirty-eight people with XP and 25 healthy controls wore UVR dosimeters and completed daily photoprotection diaries for three weeks in summer 2016. Time spent outside and UVR dose-to-face (standard erythemal dose, SED), were calculated combining data from dosimeter and diary. Sociodemographic, clinical and psychosocial variables were self-reported on the first day of the study. Mixed effects models examined the association between sociodemographic, clinical and psychosocial variables with daily UVR dose to the face and time spent outside.

**Findings:** People with XP spent mean=133mins outside during daylight and were exposed to half the average daily UVR of healthy controls (.33SED versus .58SED). Adjusting for photoprotection behaviours, the mean UVR dose-to-face for people with XP was .13SED. Higher UVR dose-to-face was associated with older age at diagnosis, lower photoprotection self-efficacy, lower necessity beliefs, and higher beliefs in clinician ability to treat negative outcomes. Interestingly, those with higher UVR exposure reported greater levels of social support and higher quality of life.

**Discussion:** Despite the serious consequences many people with XP are exposed to high UVR levels. Many of the factors associated with UVR exposure are modifiable and therefore potentially amenable to intervention.



9:30 - 9:45

## Identifying distinct patterns of change in habit strength for taking medication in adults with diabetes

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<sup>1</sup>Carleton University, Canada

<sup>2</sup>McGill University, Canada

<sup>3</sup>Douglas Mental Health University Institute, Canada

**Background:** Habit strength holds promise as a facilitator of behavioural maintenance. Given that maintenance is the persistent performance of a health behaviour over time, the promise of strong habits requires that they too persist over time. However, little is known about how habit strength changes over long periods of time. Furthermore, although studies point to interindividual variability in patterns of change in habit strength over time, this variability has not been well-explored. This study aimed to identify distinct patterns of change in habit strength for taking oral hypoglycemic medication over the course of one year.

**Methods:** Habit strength for taking oral hypoglycemic medication was measured in 675 participants with diabetes at baseline and one year later with the Self-Report Behavioural Automaticity Index. Group-based trajectory modeling was used to identify subgroups of participants who followed distinct patterns of change in habit strength over time.

**Findings:** A model comprised of five subgroups was retained as the best fitting model [BIC=-2449.64;  $2(\Delta\text{BIC})=6.70$ ]. Three of the subgroups were characterized by habit strength that was stable over time and: (1) strong (n=212), (2) moderate-strong (n=224), and (3) moderate (n=118). The remaining two subgroups were characterized by habit strength that: (4) increased over time (n=68), and (5) decreased over time (n=53).

**Discussion:** The majority of participants belonged to subgroups characterized by stable habit strength, albeit at differing strengths. This study demonstrates the insight that can be gained from carefully examining heterogeneity across participants. Future work will identify the characteristics of participants belonging to each subgroup.

9:45 - 10:00

## The psychological implications of writing online – blogging about visible, long-term skin conditions

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<sup>4</sup>University of Sheffield, United Kingdom

**Background:** Visible skin conditions such as psoriasis, acne, and alopecia can affect quality of life to a similar magnitude as other chronic conditions such as arthritis and diabetes. Support for the skin conditions is in short supply. One way in which individuals are choosing to self-manage is via online blogging. To date, no research has specifically investigated how individuals with visible, chronic skin conditions experience using blogging in relation to self-management.

**Methods:** Interpretative phenomenological analysis was used to investigate blogging experience of people living with skin conditions. Systematic online blog searching and an online survey was used to purposively sample people actively blogging. Five detailed interviews were conducted by email.

**Findings:** The initial uncertainty of the participants' conditions was often experienced as overwhelming, leading to distress, isolation, and a focus on searching for treatment. Blogging provided a space to disclose experiences and connect with others in a way that fostered ownership and normalisation as evidenced by descriptions of positive feedback received from others. Blogging was also experienced as having a positive affect on self-esteem via a perceived sense of helping others to cope.

**Discussion:** blogging may provide individuals a way to self-manage the emotional and psychosocial distress associated with chronic, visible skin conditions, via building confidence via disclosure and providing assistance to others. There is a need to further understand the mechanisms as to how blogging might support reduction of psychosocial distress associated with chronic, visible skin conditions in both bloggers and consumers of blogs.

10:00 - 10:15

## Investigating decision-making in bone-anchored hearing aid candidates: Two qualitative approaches.

R. Powell<sup>1</sup>, S. McFarland<sup>1</sup>, M. Almugathwi<sup>1</sup>, K. Green<sup>2</sup>, K. Coppack<sup>1</sup>, R. Andrew<sup>2</sup>, A. Wearden<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>Manchester University NHS Foundation Trust, United Kingdom

**Background:** Bone-anchored hearing aids (BAHA) effectively treat hearing problems where a standard air-conduction hearing aid is inappropriate, but uptake of BAHA is low. These studies aimed to understand the decision-making experience in Baha candidates and the reasons for low uptake.

**Methods:** Study 1: Semi-structured telephone interviews were conducted with 17 BAHA-eligible candidates who had recently decided whether to accept or decline the BAHA. An inductive thematic analysis was conducted. Study 2: One thousand posts by 270 BAHA users and candidates on an online discussion forum were qualitatively analysed using an inductive thematic analysis.

**Findings:** Study 1 found the decision-making experience to be highly individual. Candidates weighed up perceived benefits and problems, and made decisions according to the factors that seemed most important to them. For example, the BAHA could be viewed as either a barrier to, or a facilitator of, normality, and this was weighed against likely hearing benefits. Professional advice was valued but clinicians were felt to lack experience of living with a BAHA. Contact with BAHA users was valued. In Study 2, many discussion group users were BAHA candidates seeking information about the experience of BAHA to help them decide whether or not to accept it. Posts from BAHA users were predominantly positive but individuals who had declined Baha tended not to engage with the group.

**Discussion:** Decision making for BAHA candidates is complex and individual. A decision aid may help patients to make this decision and also assist health care professionals who provide decisional support to patients.

10:15 - 10:30

## Well-being and posttraumatic growth in stoma patients: effects of sociodemographic and disease-related variables

K. Csókási<sup>1</sup>, M. Káplár<sup>1</sup>, S. Teleki<sup>1</sup>, A. Huszár<sup>1</sup>, E.C. Kiss<sup>1</sup>

<sup>1</sup>University of Pécs, Hungary

**Background:** Intestinal ostomies may have negative physical and psychosocial consequences, and patients report many health concerns and poor health-related quality of life. Aim of the study was to determine the effects of sociodemographic and disease-related variables on well-being and posttraumatic growth in stoma patients.

**Methods:** A cross-sectional, questionnaire-based study was conducted. Study sample included 51 persons with permanent stoma (35,3% men; age: 56,53 ±15,52 years; 72,5% married). Participants completed the Psychological Well-being scale (PWB) and Posttraumatic Growth Inventory (PTGI). Sociodemographic variables and disease-related data were collected also.

**Results:** Age, gender and educational level were not associated with psychological well-being and posttraumatic growth. Married/partnered participants tended to report higher psychological well-being ( $p=0,07$ ) and scored higher on Appreciation of Life subscale of PTGI ( $p<0,05$ ). Employment status was positively associated with PWB also ( $p<0,05$ ). Time since surgery was related positively to PTGI – especially to Relating to Others and Personal Strength subscales. Reason for ostomy surgery (cancer vs other disease) was associated with psychological well-being again, cancer survivals scored significantly higher on PWB.

**Discussion:** Marital and employment status are associated with positive health outcomes in stoma patients. Long-term cancer survivals with stoma experience higher psychological well-being compared to ostomized persons for other reasons. Psychosocial interventions to improve the quality of life of people living with stoma should contain program elements designed to address social engagement and occupational issues.

# Stress: HPA axis and inflammation

9:00 - 10:30

Kirwan

Daryl O'Connor

9:00 - 9:15

## Effects of Childhood Trauma, Daily Stress and Emotions on Cortisol in Individuals Vulnerable to Suicide

D. O'Connor<sup>1</sup>, D. Branley<sup>1</sup>, J. Green<sup>1</sup>, E. Ferguson<sup>2</sup>, R. O'Carroll<sup>3</sup>, R. O'Connor<sup>4</sup>

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**Background:** Suicide is a global health issue. Dysregulated hypothalamic-pituitary-adrenal (HPA) axis activity, as measured by cortisol levels, has been identified as one potential risk factor for suicide. Recent evidence has indicated that blunted cortisol reactivity to stress is associated with childhood trauma. This study investigated whether childhood trauma and stressors and emotions were associated with diurnal cortisol levels over a 7-day study.

**Methods:** 154 participants were recruited and grouped according to history of previous suicidal attempt, suicidal ideation or as control participants. Participants completed the Childhood Trauma Questionnaire before commencing at 7-day daily diary study. Cortisol samples were provided throughout the day on 7 consecutive days. Measures of daily stressors, mood and defeat and entrapment were completed daily. Data were analysed using multi-level modelling.

**Findings:** Participants who had made a previous suicide attempt exhibited significantly flatter diurnal cortisol slopes across the 7 days compared to participants in the control group; suicide ideators were intermediate to both groups. Childhood trauma was found to be associated with flatter diurnal cortisol slopes, such that individuals who had experienced higher levels of trauma exhibited flatter cortisol slopes across the day. In particular, physical abuse was identified as being the most important subscale. Higher levels of daily defeat/entrapment were found also to be associated with a flatter diurnal cortisol slope.

**Discussion:** These results suggest that childhood trauma and perceptions of defeat/entrapment may be important proximal and distal factors associated with the development of HPA axis dysregulation.

9:15 - 9:30

## Pubertal tempo, pubertal timing and health: mediating effects of cortisol stress reactivity.

S. Dockray<sup>1</sup>, N. Messerli-Burgy<sup>2</sup>, I. Muscolino<sup>1</sup>, E. Whelan<sup>1</sup>, E. Susman<sup>3</sup>

<sup>1</sup>University College Cork, Ireland

<sup>2</sup>University of Fribourg, Switzerland

<sup>3</sup>Pennsylvania State University, United States

**Background:** Pubertal development has been associated with adolescent health, although inconsistencies in effects are reported. Psychobiological stress reactivity is also associated with puberty, and with health, and is a proposed mediator of the association of pubertal development and health. This study aims to examine the effects of pubertal development on adolescent health and examine mediational models linking (a) pubertal tempo or (b) pubertal timing to health status through cortisol reactivity to stress.

**Methods:** Adolescent participants (N = 106) completed measurements at 4 Timepoints (T), over 20 months. Standardised measures of health and health behaviour, body mass index (BMI), blood pressure (BP) and waist hip ratio (WHR) were collected at T4. Saliva samples were collected to assess cortisol reactivity to a standardised stress challenge at T2. Pubertal development was assessed at T1 and T3 by salivary testosterone, estrogen (by blood), and a physical examination. Structural equation modelling was used for analyses.

**Findings:** Girls with faster pubertal tempo were more likely to be overweight at T4, and stress reactivity and pubertal development were significantly associated; there was a strong direct effect of pubertal development on BMI ( $\beta = .216$ ,  $SE = .34$ ,  $p = .03$ ) and this was mediated by cortisol reactivity in girls ( $\beta = .178$ ,  $SE = .72$ ,  $p = .04$ ) but not in boys. Fit indices for the model were good.

**Discussion:** The findings indicate the contribution of pubertal tempo and stress reactivity to health in adolescence. The results suggest a broader psychobiological framework for investigating influences on adolescent health.

9:30 - 9:45

## Stress and metabolic syndrome: The Chilean study of psychological predictors of obesity and metabolic syndrome

M. Ortiz<sup>1</sup>, J. Sapunar<sup>1</sup>

<sup>1</sup>Universidad de La Frontera, Chile

**Background:** Psychological stress and depressive symptoms are variables associated with metabolic syndrome (MetS), however these associations have been studied employing cross-sectional designs, and little attention have been paid to whether these variables predicts MetS and its components trajectories.

**Aim:** To determine the longitudinal association between psychological stress, depressive symptoms and MetS, and whether these variables predict MetS and its components trajectories in an adult's Chilean sample.

**Methods:** Four hundred and twenty-three participants (mean age = 44 years old), free of cardiovascular disease at baseline were enrolled into the Chilean study of psychological stress, obesity and MetS. Participants were followed-up during three years (three waves); at each year they completed psychological questionnaires, provided blood samples, and anthropometrics measures.

**Findings:** Hierarchical linear regression showed that chronic psychological stress at baseline predicted the total number of MetS components (MetS score) at third wave ( $\beta = 0.147$ ;  $p < 0.01$ ). Growth curve modeling allowed to determine that participants at baseline scoring +1 S.D. over the mean in psychological stress and depressive symptoms had a higher waist size circumference trajectory in comparison to those scoring -1 S.D. above the mean.

**Discussion:** Chronic psychological stress is longitudinally associated with the MetS score. Further, psychological stress and depressive symptoms at baseline predicted elevated MetS score trajectories, and a highest waist size circumference.



9:45 - 10:00

## Post-mastectomy breast reconstruction wound healing and the association of perceived stress and serum cortisol levels

L. Schumacher<sup>1</sup>, D. Renshaw<sup>1</sup>, A. Park<sup>2</sup>, E. Grunfeld<sup>3</sup>

<sup>1</sup>Coventry University, United Kingdom

<sup>2</sup>University Hospitals Coventry and Warwickshire NHS Trust, United Kingdom

<sup>3</sup>Birkbeck, University of London, United Kingdom

**Background:** Post-mastectomy breast reconstruction for breast cancer can bring about changes in body image. Scarring, or wound healing, is considered a form of body disfigurement and is associated with psychosocial difficulties, including areas of body image and quality of life. The aim of this study is to demonstrate the relationships between objective and subjective wound healing, between objective wound healing and serum cortisol levels, and between perceived stress and serum cortisol levels in women undergoing post-mastectomy breast reconstruction.

**Methods:** Nineteen women undergoing post-mastectomy breast reconstruction were recruited to a pilot study. At one week prior, one week after, and one month after surgery, participants completed fifteen saliva samples at each time-point as well as measures for psychosocial factors, including stress (PSS) and subjective wound healing. Objective measurement of wound healing was conducted at three to eight weeks post-surgery using the EPISCAN, a high frequency ultrasound imaging system. Serum cortisol levels analysed with salivary cortisol enzyme immunoassay.

**Findings:** A Pearson's correlation was computed to assess the relationship between perceived stress and subjective wound healing of the reconstructed breast(s) at one month post-surgery. There was a positive correlation between the two variables,  $r = 0.530$ ,  $n = 13$ ,  $p = 0.031$ .

**Discussion:** This output is significant in its combination of multiple methodologies to address the research aims; this output will add new knowledge that will contribute to the understanding of how women heal after a breast reconstruction and how the role psychosocial difficulties may play in wound healing.

10:00 - 10:15

## Driving Under Pressure: The Effects of Stress on Driving Performance

C. Doody<sup>1</sup>, A. Kervick<sup>1</sup>, C. Tetrault<sup>1</sup>, B. Hughes<sup>1</sup>, P. Ó Súilleabháin<sup>1</sup>, K. Sarma<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** This study explores the effects of stress on driving-performance. Current thought suggests that driver stress, in particular driving under time pressure, can lead to inattention and inappropriate speed, thus inflating the risk of collision.

**RQ:** Do stressful driving conditions (time pressure) impact driver performance?

**Methods:** The study was conducted using a Driving Simulator with participants completing several drives and a final high stress drive. Stress was induced by a time-pressure task, buzzer noise and a Peripheral-Detection-Task. Driving performance was measured by Percentage of track driven while speeding and number of speeding violations.

Objective Stress was measured over three variables: systolic, diastolic BOP and heart rate), and subjectively via questionnaire. Forty-six female (N =46) drivers participated in this study which utilised a within-subjects design

**Findings:** Whilst driving under stress participants were significantly more likely, to drive a greater percentage of the track over the speed limit ( $z = -4.7$ ,  $p < .001$ , with a large effect size ( $r = .54$ )) and commit speeding violations ( $z = -4.12$ ,  $p < .001$  with a medium effect size ( $r = 0.47$ )) compared to low stress condition (Wilcoxon-Signed-Ranks-Test). Cardiovascular-Reactivity was subjectively shown to have increased during the time pressure challenge, showing stress was in fact elicited- SBP ( $z = -3.560$ ,  $p < .001$  with a medium effect size of ( $r = .41$ ))

**Conclusions:** This research highlights the negative impact that stress has on driving performance, the findings are also relevant to cardiovascular health in terms of the impact of prolonged exposure to stressful driving conditions.

# Dietary behaviour change

9:00 - 10:30

Dillon

Marijn de Bruin

9:00 - 9:15

## Acceptability, effectiveness and cost-effectiveness of weight loss interventions for severe obesity: A health technology assessment

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<sup>2</sup>Health Services Research Unit, University of Aberdeen, United Kingdom

<sup>3</sup>Health Economics Research Unit, University of Aberdeen, United Kingdom

**Background:** The prevalence of severe obesity (BMI $\geq$ 35kg/m<sup>2</sup>) continues to rise. This project synthesised the literature to aid recommendations for weight loss interventions based on the acceptability, effectiveness and cost-effectiveness of different approaches.

**Methods:** Systematic literature searches for studies that described long-term randomised controlled trials of weight loss interventions for people with a BMI $\geq$ 35, qualitative feasibility and acceptability data, and economic evaluations of weight loss interventions. A realist perspective combined quantitative and qualitative data. Meta-analyses were conducted on trial data. Economic data informed microsimulation models.

**Results:** 32 qualitative studies, 130 RCTs, and 47 economic evaluations were included. Preliminary analyses suggest that dietary programmes (with/without physical activity) are effective (-4.37kg [-4.61,-4.13]). Beneficial effects were observed for adding physical activity to diet (-2.59kg [-4.77,-0.41]) and intensified counselling (-1.90kg [-3.00,-0.79]). Surgical interventions were more effective (e.g., gastric bypass at 5yrs -20.23kg [-23.75,-16.71]). Most interventions were cost-effective at £20k/QALY. Bariatric surgery yielded more additional QALYs per person treated (1.41) than weight management programmes (0.19). The incremental cost per QALY gained was £11,922 (surgery) and £1494 (Weight Management Programmes). Participants in behavioural trials reported favouring intensive face-to-face, group-based interventions with flexibility regarding dietary and physical activity formats.

**Conclusions:** Behavioural and surgical interventions are effective and cost-effective at reducing weight amongst people with a BMI $\geq$ 35kg/m<sup>2</sup>. Surgical interventions yield the greatest QALY benefits. However, if widespread adoption of surgery is prohibitively expensive due to limited budget, offering weight management programmes will yield most benefits – increasingly so when combined with offering bariatric surgery to people with obesity-related comorbidities.

9:15 - 9:30

## Changing diet and physical activity behaviour in type 2 diabetes

K. Craddock<sup>1</sup>, G. ÓLaighin<sup>1</sup>, F. Finucane<sup>1</sup>, R. McKay<sup>2</sup>, L. Quinlan<sup>1</sup>, K. Martin Ginis<sup>2</sup>, H. Gainforth<sup>2</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>University of British Columbia, Kelowna, Canada

**Background:** Changing diet and or diet and physical activity behaviours is very challenging, particularly for people with type 2 diabetes. The objective was to consolidate findings from two meta-analyses to identify behaviour change techniques (BCTs) and intervention features associated with changes in HbA1c and body weight.

**Methods:** We included BCTs from published randomised controlled trials between 1975 and 2017, examining combined diet and physical activity interventions (n = 13) and diet only interventions (n = 54). We evaluated trends across both studies, use of BCTs, intervention features, methodological rigour, fidelity and changes in HbA1c and body weight.

**Findings:** Forty-two different BCTs were applied in the diet interventions (M = 7/study), and 46 (M = 13.5/study) in the diet plus physical activity interventions. Using a greater or lesser number of BCTs was not associated with positive statistical or clinical outcomes in either study. BCTs and intervention features associated with clinical effectiveness differed in the two reviews, as did the time course of HbA1c changes. Increased number and frequency of total contacts was associated with greater reductions in HbA1c in both reviews.

**Discussion:** Our data highlight the specificity of BCTs and intervention features in changing diet and/ or physical activity behaviour in type 2 diabetes. Our data also highlights the importance of intervention fidelity and greater support for people with type 2 diabetes through increased contact with intervention providers. Potentially, interventions aimed at changing both the environment and behaviour may be more efficacious than trying to change either alone.

9:30 - 9:45

## Eating As Treatment (EAT): A health behaviour change intervention for head and neck cancer patients

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<sup>3</sup>Centre for Dietetics Research, The University of Queensland, Australia, Australia

**Background:** Malnutrition in head and neck cancer (HNC) patients is common and associated with poorer radiotherapy outcomes including increased mortality. A dietitian delivered health behaviour change intervention (Eating As Treatment; EAT) aimed to reduce malnutrition in HNC patients undergoing radiotherapy.

**Methods:** A stepped wedge cluster randomised design was used in this National Health and Medical Research Council funded trial. Dietitians were trained in the EAT intervention. Practice change strategies were implemented to improve delivery of care according to best practice guidelines.

307 HNC patients were recruited from four Australian radiotherapy departments. The primary outcome of nutritional status was analysed using generalised linear mixed models. Dietitian fidelity to intervention specific skills and Behaviour Change Counselling (BCC) skills were assessed using a random sample of audio recorded and coded dietetic sessions. Frequencies of patients for whom dietetic clinical guidelines were implemented were assessed via medical record audits.

**Findings:** Patients who received the EAT intervention had significantly better scores on the primary outcome of nutritional status ( $p = 0.025$ ). Compared to pre-training, dietitian application of intervention specific skills and BCC was significantly greater. For four of the evidence based guidelines, the estimated odds ratio was significantly different to 1.

**Discussion:** This trial is the first and largest multi-centre trial of psychological strategies to attempt to avoid malnutrition in HNC patients. EAT is a potentially cost effective intervention and has shown improvement in changing clinician behaviour, promoting improved adherence to best practice guidelines and improving HNC patient outcomes in a multi-centre trial around Australia.

9:45 - 10:00

## Behavioral context effect on goal-priming intervention for reducing unhealthy eating

S. Ohtomo<sup>1</sup>

<sup>1</sup>Konan Women's University, Japan

**Background:** Behavioral context that forms unhealthy eating habits is a barrier against intention-based intervention. Instead of the intervention, a goal-priming intervention that changes behavior unconsciously is being developed. The study examines how the effect of goal-priming is moderated by psychological and environmental contexts.

**Methods:** 486 people participated in the web-based experiment. The experiment measured motivational variables (eating intention, unhealthy willingness), and unhealthy snacking habits. Then, about half of the participants were primed for a dieting goal by being asked weight-related questions (body length, weight, satisfaction), i.e. priming condition, and the others were not primed, i.e. control condition. One week after the priming manipulation, the number of calories consumed eating snacks, visits to supermarket, and stored foods were measured.

**Findings:** GLM analysis indicated that age, unhealthy willingness, habit, the number of visits to supermarket and stored foods determined consumption of calories. Moreover, priming × unhealthy willingness and priming × habit interactions were found. Simple slope analyses indicated that unhealthy willingness in the priming condition ( $\beta=.80$ ,  $p=.072$ ) had a weaker effect on consumption than in the control condition ( $\beta=1.21$ ,  $p=.019$ ). The goal-priming had no effect on consumption for people with a strong habit ( $\beta=-.32$ ,  $p=.659$ ), unlike people with a weak habit ( $\beta=1.86$ ,  $p=.013$ ).

**Discussion:** The study suggested that goal-priming reduced the influence of unhealthy willingness and led to behavioral change, over and above the influence of the existing environmental context. However, the effect of goal-priming was moderated by habit. These findings discussed the interaction between goal-priming and behavioral context in intervention studies.

10:00 - 10:15

## Colourful, healthy, tasty: Facilitating healthy eating through simple visual cues

L.M. König<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Although public interest in healthy eating is high, most people do not adhere to available dietary guidelines. While available guidelines often focus on complex rules, the present study tested a simpler strategy for healthy eating by investigating meal colour variety as a visual cue. Specifically, it compared four food choice strategies ('colourful', 'typical', 'healthy' and 'low-calorie') based on meal composition and feasibility.

Eighty-four participants self-served four lunch meals from a realistic food replica buffet after being prompted to compose a (1) typical, (2) healthy, (3) low-calorie, and (4) colourful meal. The meals were unobtrusively weighted to determine the proportionate weight of eight food groups (vegetables, fruit, grains and starches, protein sources, dairy, oils and fats, sugary foods, drinks). Furthermore, participants were asked to rate the prompts' feasibility.

Within-subjects ANOVAs revealed significant differences between meals for all food categories except protein sources ( $F(3,249) \geq 7.82$ ,  $p \leq .001$ , partial  $\eta^2 \geq .09$ ). Importantly, colourful meals contained more vegetables and less oils and fat than typical meals and more fruit than all other meals. Moreover, 63% of participants indicated that colourful meals are tastier than low-calorie or healthy meals, and eating colourful meals was rated to be more feasible than eating low-calorie meals ( $F(2,166) = 84.56$ ,  $p < .001$ , partial  $\eta^2 = .51$ ).

Eating colourful meals leads to healthy and tasty food choices, and therefore is a promising strategy to facilitating healthy eating in daily life.



10:15 - 10:30

## Implicit Process Interventions in Eating Behavior: a Meta-analysis Examining Mediators and Moderators

M. Aulbach<sup>1</sup>, K. Knittle<sup>1</sup>, A. Haukkala<sup>1</sup>

<sup>1</sup>University of Helsinki, Finland

Dual-process models integrate deliberative and impulsive mental systems, and predict dietary behaviors better than deliberative processes alone. Computerized interventions developed to directly alter impulsive behavioral antecedents include the Go/No-Go, Stop-Signal and Approach-Avoidance tasks. The current meta-analysis examines the effects of these tasks on dietary behaviors, explores sample- and task-related characteristics as potential moderators of effectiveness, and examines stimulus devaluation as a proposed mediator.

Nineteen randomized controlled trials testing one of these tasks (38 comparisons) were included in a random-effects meta-analysis, which indicated small cumulative effects on eating-related behavioral outcomes ( $g = -0.18$ ,  $CI_{95} = [-0.32; -0.05]$ ,  $p = .008$ ) and stimulus evaluations ( $g = -0.30$ ,  $CI_{95} = [-0.50; -0.09]$ ,  $p = .004$ ). Task type was the only significant moderator of these effects, with Go/No-Go tasks producing larger effects than Stop-Signal or Approach-Avoidance tasks. Effects of interventions on stimulus evaluations were related to effects on eating behavior ( $B = 0.46$ ,  $CI_{95} = [0.11; 0.82]$ ,  $p = .01$ ).

Future research should focus on Go/No-Go tasks for altering dietary behavior via the impulsive system, and should explore effects of these interventions over longer periods of time with repeated exposures, especially in real-world as opposed to laboratory settings. This should include measurements of stimulus devaluation to further improve our understanding of intervention mechanisms.

# Theoretical and methodological issues in digital intervention development

9:00 - 10:30

McMunn

Brian Oldenburg

9:00 - 9:15

## Designing and testing theory-based mHealth tools for weight loss maintenance: The NoHoW Toolkit

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<sup>8</sup>Research Unit for Dietary Studies at The Parker Institute, Denmark

<sup>9</sup>University of Lisbon, Portugal

**Introduction:** Few comprehensive solutions are available for weight loss maintenance (WLM). NoHoW is a EU H2020-funded project testing if theory- and evidence-based techniques delivered via a digital Toolkit (TK) are effective in helping people maintain clinically significant ( $\geq 5\%$ ) weight loss. This study aimed to comprehensively develop and pilot test the NoHoW TK.

**Methods:** The TK is based on (1) state-of-art theories (Self-regulation Theory, Self-Determination Theory, and emotional regulation); (2) integration of consumer physical activity and weight tracking devices (3) web-design expertise; (3) user-testing; (4) preliminary mixed methods research. Informed by guidance for developing complex interventions, we used a systematic approach to the translation of theory and evidence into digital intervention components (theory-driven logic models; translating techniques into digital specifications).

**Findings:** We identified 16 themes targeting theoretical constructs, resulting from literature review, a large international survey in European adults, and in-depth interviews. Sessions ( $\pm 50$ ) include a set of activities ( $\pm 300$ ) designed to engage participants for 5-7 minutes (e.g. quizzes, infographics). Devices usage in user testing phase helped refine TK specifications. A feasibility study was run with v 1.0 of the TK followed by a pilot study with v 2.0, which is now being tested in a large-scale European 2 x 2 factorial trial (self-regulation/motivation versus emotion-regulation) in 1600 participants that meet WLM criteria.

**Conclusions:** NoHoW TK is an innovative digital system for WLM, illustrating a systematic approach to test behaviour change principles in a digital intervention, which may contribute to sustainable Europe-wide solutions to WLM.

9:15 - 9:30

## Are app-delivered mindfulness and relaxation exercises appealing to cancer patients? A feasibility study

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<sup>2</sup>Institute for Social Medicine, Epidemiology and Health Economics, Charité – Universitätsmedizin Berlin, Germany

**Background:** Mindfulness- and relaxation-based interventions can lower cancer patients' distress. eHealth interventions can increase the access to such interventions, although app studies are lacking. Therefore, we developed a mindfulness and relaxation app for cancer patients (supported by the Swiss Cancer League, KLS-3564-02-2015). This analysis aims to evaluate the feasibility of the app.

**Methods:** In this prospective observational study (DRKS000104814) with a mixed-methods approach, cancer patients received a mindfulness and relaxation app for 20 weeks. Self-reported measures (e.g. anxiety, depressive symptoms) were assessed and the app gathered data on time spent practicing the exercises. Semi-structured interviews were conducted and analyzed using content analysis. Recruitment went from July 2016 to December 2017. We analyzed adherence and dropouts of patients having finished the first ten weeks of the app intervention.

**Findings:** Data from 82 patients (77% female) showed that at week ten, around half of the patients (n = 44) were still using the app at least once per week, although adherence varied largely between patients (range of exercises of all patients at week ten: 0-14). Age, gender, baseline anxiety, depressive symptoms, and quality of life did not predict a long-term app use. Patient interviews confirmed that the app is easy to use, but a larger variety of exercises could be appealing. Prior experience with mindfulness and relaxation exercises was rather hindering long-term app use.

**Discussion:** Preliminary data showed a good adherence, although with a large variability. Future research should explore tools (e.g. planning, feedback) to motivate more patients to a long-term use.

9:30 - 9:45

## Sequential Health Behaviors in Daily Life: An Ecological Momentary Assessment Approach

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**Background:** Little is known about the sequential interplay of different health behaviors. Health behaviors may be connected in four different ways: a healthy behavior may lead to a subsequent healthy or unhealthy behavior (positive consistency and licensing, respectively), or an unhealthy behavior may lead to a subsequent unhealthy or healthy behavior (negative consistency and cleansing, respectively). In this study, these four possible types of sequential health behaviors were examined jointly in people's daily life.

**Methods:** The study used ecological momentary assessment. Participants were randomly signaled five times daily on their smartphones for 7 consecutive days. They reported both healthy and unhealthy behaviors that occurred within the past hour. To assess the temporal dynamics of health behaviors over time, participants were also asked if the (healthy or unhealthy) behavior was related to any previous healthy or unhealthy behavior. In addition, they completed measures of life satisfaction, general health status, and compensatory health beliefs.

**Findings:** Positive consistency predicted satisfaction with life, whereas negative consistency and cleansing negatively predicted general health status. Compensatory health beliefs were not related to actual cleansing or licensing behavior.

**Discussion:** Fostering positive consistency and discouraging cleansing behavior should play a pivotal role in health promotion programs.

9:45 - 10:00

## A review of mobile apps for antimicrobial resistance (AMR): targeting patients' behaviour

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<sup>1</sup>Spoonful of Sugar Ltd, United Kingdom

<sup>2</sup>UCL, United Kingdom

<sup>3</sup>Bournemouth University, United Kingdom

**Background:** Addressing public perceptions about antimicrobials is key for combatting antimicrobial resistance (AMR) to influence how antimicrobials are used. Digital interventions which are theory-based are more effective in achieving successful behaviour change. The aim of this study was to review mobile apps intended for patient use to evaluate the use of health psychology in addressing patients' perceptions about AMR.

**Methods:** A systematic search of online app stores was conducted. Relevant apps were downloaded. Data extracted included app characteristics and whether they provided information and addressed perceptions about AMR. Data was analysed using a deductive framework based on the Perceptions and Practicalities Approach (PAPA) - a validated framework for assessing behaviour of patients in relation to their treatment - and the Three Components of Behaviour Change (3CBC) – a model to analyse the drivers of success in behavioural interventions.

**Findings:** Searches yielded 348 apps, from which 24 met our inclusion criteria. From these, 12 (50%) were games, 22 (92%) were free and 2 targeted children. Eleven (46%) provided information about antibiotics through text (n=10) and/or video (n=2) but only 7 (29%) mentioned AMR. Four apps instructed patients to complete their course and three addressed perceptions about AMR, including the misconception that antibiotics can treat viruses and the role of antibiotic misuse in AMR.

**Discussion:** Digital antimicrobial interventions currently available to the public lack information about AMR. Only a few address patients' perceptions or are theory-based. Incorporating these elements could be key to changing patient behaviour around antimicrobials.

10:00 - 10:15

## Online information-seeking about breast cancer symptoms: Capturing online behaviour with an Internet browsing tracking tool

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<sup>1</sup>University of Surrey, United Kingdom

**Background:** It is unclear how consulting the Internet when experiencing potential cancer symptoms influences symptom attribution. We explored women's symptom attribution and online information-seeking in response to a hypothetical and unfamiliar breast change suggestive of cancer.

**Methods:** Online survey with 56 cancer-free women (age range: 50-78 years, Mean: 60.34) responding to a scenario describing a nipple rash. Participants made symptom attributions when presented with the scenario (Time1) and again after seeking information online (Time2). An online tracking tool captured in real time the participants' search terms and visited websites.

**Findings:** At Time1, 25/56 participants (44.6%) attributed the symptom to cancer, yet only one of these used 'cancer' as a search term. For those where online searching was captured, most participants (40/46, 87%) used rash-related search terms, particularly 'nipple rash', and most (41/46, 89%) visited sources containing breast cancer information, with the NHS webpage "Paget's disease of the nipple" being the most visited source. After engaging in the online search task, 37 participants (66.1%) attributed the symptom to cancer.

**Discussion:** Making a cancer attribution for an unfamiliar breast change did not translate into cancer-related searches. Equally, not all Internet searches led to a cancer attribution. Online information-seeking may not necessarily help women who experience unfamiliar breast cancer symptoms understand their condition. Finally, it is feasible to use an online browser tracking tool to explore information-seeking about unfamiliar symptoms.

10:15 - 10:30

## Are people tweeting about exercise also talking about fat? A descriptive study of Twitter communities.

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Accessibility to health-related information in Twitter is established through appomediation, a collaborative information-filtering process commonly associated with social media (i.e. communities of patients providing information for others). Previous studies have not only shown a high prevalence of weight stigma among twitter communication but also that up to 62% of “fat” related tweets promote weight loss in an overtly pro-thin manner. This raises the question of whether or not the structure and contents of exercise-talk communities are related to those of fat-talk. This study takes a social networks theoretical approach along with natural language processing (NLP) techniques to describe communities and themes among both exercise-talk and fat-talk communities. More than 3 million tweets and their respective accounts were collected over the course of 3 months. Using social network analysis, the most followed HUBs (information sources), network overlaps, and clusters of interconnected users were identified. NLP and retweet metrics allowed the identification of linguistic n-grams and common themes. Results show that both communities are at least mildly overlapped since the diameter of the network stays the same, while the geodesic distance and modularity have a slight increase from the exercise-talk network to the combined one. There is also a 7.73% overlap in users belonging to both communities. This could indicate that the users in the exercise-talk community serve as a connecting bridge between highly scattered sub-clusters of the fat-talk community. The relationships between these two communities could be harnessed for future public health and weight stigma reduction interventions.



# Living with chronic disease

11:00 - 12:30

Anderson

Andrew Thompson

11:00 - 11:15

## Women with IBS have similar levels of disease burden to those with IBD: Clinicians listen!

J. Egan<sup>1,2</sup>, I. Doyle<sup>1</sup>, B. Slattery<sup>2</sup>, B. McGuire<sup>1,2</sup>

<sup>1</sup> National University of Ireland, Galway, Ireland

<sup>2</sup> Centre for Pain Research, NUI Galway, Ireland

**Background:** To compare psychological and QOL differences between women with IBS and IBD in a large online sample and to validate the short-form of the IBDQ for use across clinical and research samples

**Methods:** Following a National Press release in Ireland, a large online sample of female participants (N= 995) with a diagnosis of either IBD (249) or IBS (746) were compared across the IBDQ and several measures of psychological well-being.

**Findings:** Participants with IBS had higher scores on measures of absorption, an aspect of dissociation. They also had more difficulty in regulating their emotions. Both groups were similar across three of the IBDQ scales. As expected, participants diagnosed with IBD had higher scores on the 'Bowel' sub-scale of the IBDQ. A multiple regression found that a model including age, depression, anxiety and stress accounted for 31% of the variance for the SIBDQ, with depression accounting for 24% of the variance and anxiety accounting for a further 5%. The SIBDQ correlated moderately with all 3 scales of the DASS. A factor analysis suggested that a single factor was being measured in the SIBDQ across both the IBD and IBS samples.

**Discussion:** Clinicians need to be informed of the significant clinical and psychological burden which women with IBS present and that their well-being is as affected as much, if not more, than those with an 'organic' IBD diagnosis. The SIBDQ appears to be a valid and reliable measure for both clinical populations. These findings need to be replicated in future studies.

11:15 - 11:30

## Benefit finding in renal transplantation and associated psychological and clinical correlates: a prospective study

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<sup>2</sup>Carnegie Mellon University, Pittsburgh, Pennsylvania, United States

<sup>3</sup>Dialysis Center Groningen, Netherlands

**Background:** The identification of positive psychological changes, including benefit finding (BF), in chronic illness has gained substantial interest. However, less is known about BF in the context of a positive medical intervention. End stage renal disease (ESRD) can be regarded as a burdensome condition, but transplantation (Tx) is expected to restore physical and psychological functioning to a large extent. The aim of this study was to examine 1) changes in BF from pre- to 12 months post-Tx, 2) the concurrent association of disease-related characteristics and optimism to BF and 3) the potential causal relations between BF and distress.

**Methods:** In this longitudinal study, 319 patients completed questionnaires before, 3 months, 6 months and/or 12 months post-Tx. Multilevel models were used for the analyses. Measures included the Illness Cognitions Questionnaire to measure BF, the Life Orientation Test to measure optimism and the General Health Questionnaire to measure distress.

**Findings:** BF increased from pre- to post-Tx. Fewer symptoms and comorbidities were related to more BF. Higher optimism was related to more BF. The direction of the relation between BF and distress changed over time. Before Tx, distress predicted an increase in BF, whereas post-Tx, distress predicted a decrease in BF. The causal relation between BF and distress post-Tx appeared to be reciprocal. **Discussion:** A positive medical intervention might facilitate the development of BF. This study indicates the need for longitudinal research on the relation between BF and psychological health in the face of positive events.

11:30 - 11:45

## Fatigue in prevalent haemodialysis patients predicts all-cause mortality and kidney transplantation

F. Picariello<sup>1</sup>, S. Norton<sup>1</sup>, R. Moss-Morris<sup>1</sup>, I. Macdougall<sup>2</sup>, J. Chilcot<sup>1</sup>

<sup>1</sup>Institute of Psychiatry, Psychology and Neuroscience, King's College London, United Kingdom

<sup>2</sup>Department of Renal Medicine, King's College Hospital, United Kingdom

**Background:** Fatigue affects 49% to 92% of dialysis patients with considerable repercussions on their functioning and quality of life. The aim of this study was to evaluate whether fatigue severity and its impact on functioning predict survival (all-cause mortality) and time to transplantation among in-centre haemodialysis patients.

**Methods:** As part of a prospective study of fatigue in haemodialysis, survival data was collected between April 2014 and August 2017. Fatigue severity was measured using the Chalder Fatigue Questionnaire (CFQ) and fatigue-related functional impairment using the Work and Social Adjustment Scale (WSAS). Sociodemographic, clinical, and psychological data were collected. The association between fatigue and outcomes was assessed using proportional hazard survival models, allowing for competing risks, and discrete-time survival models. All models were adjusted for relevant risk factors.

**Findings:** The sample consisted of 174 haemodialysis patients. There were 37 deaths and 31 transplantations over 3 years. At 1095 days, cumulative survival was 70.5% and the cumulative transplantation rate was 22.2%. In unadjusted models, fatigue was significantly associated with an increased risk of death (CFQ-continuous SHR=1.06, 95% CI 1.02, 1.11; CFQ-dichotomous SHR=2.18, 95% CI 1.11, 4.31; WSAS SHR=1.03, 95% CI 1.01, 1.05) and decreased likelihood of transplantation (CFQ-continuous SHR=0.92, 95% CI 0.87, 0.98; CFQ-dichotomous SHR=0.33, 95% CI 0.15, 0.75; WSAS SHR=0.96, 95% CI 0.93, 0.99). However, these associations ceased to be significant after controlling for covariates.

**Discussion:** Fatigue was predictive of an increased risk of death and decreased likelihood of transplantation, possibly through distress and impaired functioning, rather than clinical and inflammatory markers.

11:45 - 12:00

## The parent child experience of pre-adolescent alopecia areata an interpretative phenomenological analysis.

A. Thompson<sup>1</sup>, A. Raman<sup>1</sup>

<sup>1</sup>University of Sheffield, United Kingdom

**Background:** Alopecia areata (AA) is an autoimmune condition that can lead to total loss of hair on the scalp and body, and most often begins before the age of twenty. Studies have highlighted that there can be psychosocial issues associated with AA across the lifespan, particularly at key developmental stages, yet the parent-child experience of AA has not been investigated.

**Methods:** This study uses Interpretative Phenomenological Analysis (IPA) to explore the lived experience of four pre-adolescent children with AA, and one parent of each child. Recognised methods of quality control and reflexivity were used.

**Findings:** Four superordinate themes were identified: 'Support seeking', which focused on the journey to diagnosis and accessing appropriate support; 'loss of self', with both parents and children expressing a sense of grief; 'managing self and others', which referred to the struggle experienced by children who reported regularly having to answer questions from peers about their hair-loss and feeling the need to protect their parent from difficult feelings, whilst managing their own distress; and 'concealment', which concerned the use of wigs, hats and other cosmetic solutions. Also of note, parents frequently questioned whether there was a link between AA and stress.

**Discussion:** The study highlights the psychological trauma and grief experienced by children with living with alopecia areata and their parents, and the need for healthcare professionals to provide timely emotional and practical support alongside medical investigations. We hope that the findings will inform the development of helpful resources and psychological interventions for families dealing with AA.

12:00 - 12:15

## A stakeholder informed feasibility study of tele-coaching to improve adherence in patients with cystic fibrosis

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<sup>3</sup>Children's Hospital of Colorado, United States

<sup>4</sup>Northwestern University, United States

<sup>5</sup>National Jewish Health, United States

**Background:** The complexity and time-burden of therapies for cystic fibrosis challenge patients to follow their treatment regimen. Patient adherence in CF is similar to that of other chronic diseases, with estimates ranging 30-70%. Consequently, the Cystic Fibrosis Foundation Therapeutics Success with Therapies Research Consortium (STRC) has commenced research to create and test patient-centered interventions to improve treatment adherence.

**Methods:** Our multi-center pilot study through the STRC involves developing and testing the adherence promotion effect of tele-coaching, an intervention combining key aspects of a successful provider-patient partnership with evidence-based behavioral strategies to address treatment non-adherence. To devise a viable tele-coaching intervention, our study first involves collecting stakeholder data from 35-40 people with CF (aged 14-25 years), their parent/primary caregiver, and CF care team providers via semi-structured interviews and video-conference focus group meetings. Interview questions tap into patient access to "smart-devices" (devices capable of internet-based web conferencing), acceptance of tele-coaching intervention components, and preference for intervention structure (e.g., frequency of sessions; care-team specialties as coaches). Other relevant study procedures (e.g., validation of an adherence survey to guide coaching sessions) also are evaluated.

**Findings:** All interviews are audio-recorded, transcribed, and will be coded for thematic analysis. Data collection is ongoing, and recent transcriptions are in the process of being coded. Our report of results will focus on youth engagement in intervention development and acceptability of study procedures.

**Discussion:** The study will determine feasibility, and identify logistical challenges, for implementing a tele-coaching intervention to promote patient adherence behaviors prior to a pilot randomized controlled trial.

12:15 - 12:30

## The experience of self-conscious emotions in Inflammatory Bowel Disease: A Thematic Analysis

N. Robertson<sup>1</sup>, R. Piper<sup>1</sup>, S. Allan<sup>1</sup>

<sup>1</sup>University of Leicester, United Kingdom

**Aim:** Emotional experiences for those living with the chronic gastro-intestinal conditions that comprise Inflammatory Bowel Disease (IBD) are under-researched. Yet self-conscious emotions including embarrassment, shame and humiliation are reported as significant in delaying help-seeking for bowel symptoms, and potentially confer poorer health outcomes and diminished quality of life. This study therefore aimed to explore the experience of self-conscious emotions within an IBD population, and their social and psychological impacts.

**Method:** Fifteen participants recruited from outpatient IBD clinics and patient support groups, engaged in semi-structured interviews regarding their experiences of self-consciousness in relation to their condition. Data were analysed using thematic analysis which followed an inductive, semantic approach and was conducted from a critical realist position.

**Results:** Two super-ordinate themes, each with three sub-themes, emerged. Super-ordinate themes captured the emotions of embarrassment, shame, humiliation and guilt, notably in relation to experiences which threatened participants' preferred identities. 'Despicable me: A lack of control' encapsulated participants' distress associated with a profound alteration in their self-perception, and their struggles to mitigate this. 'Despicable you: A lack of understanding' captured participants' distress and anger associated with a sense of being unfairly judged by other people. Implications for psychologists suggest greater consideration of therapeutic approaches which can target self-conscious emotions such as shame, notably compassion-focused approaches, as well as increasing public health awareness about invisible disabilities such as IBD.

**Conclusion:** Experiences of IBD appeared to undermine patient self-identities through the generation of distinct self-conscious emotions and should be identified and targeted, where necessary, in therapeutic interventions.

# Looking forward and looking back: Feasibility and acceptability of interventions

11:00 - 12:30

Kirwan

Falko Sniehotta



11:00 - 11:15

## Patients' and practitioners' views on intensive management for moderate rheumatoid arthritis: a qualitative study

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**Background:** The TITRATE trial seeks to test whether intensive management is valuable in moderately active rheumatoid arthritis in achieving disease remission. Intensive management is a complex intervention consisting of: 1) receipt of a patient handbook, 2) shared treatment planning, 3) optimised medication (including the opportunity for biologics), 4) 12 x monthly appointments, and 5) tailored treatment support based on motivational interviewing techniques. This study aimed to explore patients' and practitioners' views on the feasibility and acceptability of intensive management.

**Methods:** An exploratory qualitative study, nested within a randomised controlled trial. Participants were patients (n=15) in the intensive management arm of the trial and rheumatology practitioners (n=16) delivering the intensive management intervention, from clinics across England. Data were collected via semi-structured interviews and analysed using thematic analysis and iterative categorisation.

**Findings:** Most patients did not use the handbook. A small number of practitioners and patients found that the shared treatment plan facilitated interaction during the sessions. Practitioners liked having the option of offering biologics. Most patients found the optimised medication (following monthly joint assessment) helpful and side-effects experienced were resolved. Monthly appointments were largely acceptable to both groups who cited several treatment benefits (e.g. practitioners built close relationships with patients, attendees liked the continuity of care from the same practitioner). Treatment support increased patients' self-awareness and sense of control over their symptoms.

**Discussion:** This study suggests that: a) patients would benefit from more frequent contact with the same practitioner, and b), intensive treatment support is feasible and perceived to be beneficial.

11:15 - 11:30

## Acceptability and Feasibility of a self-management intervention to improve adherence rates in women prescribed tamoxifen

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**Background:** This study tested a psychoeducational intervention aiming to modify key psychological variables and improve adherence rates in breast cancer survivors prescribed tamoxifen. Despite several studies highlighting the extent of non-adherence in this population, interventions are currently lacking. A self-management intervention manual was developed based on the Intervention Mapping Framework and MRC guidelines. The intervention provided information on how tamoxifen works, remembering to take tamoxifen and managing side effects.

**Methods:** The intervention was tested in a pre-post feasibility and acceptability study with 33 women prescribed tamoxifen scoring  $\leq 24$  on the Medication Adherence Rating Scale. The intervention lasted four to six weeks. Participants completed questionnaires pre- and post-intervention, including adherence, medication beliefs and quality of life. Eligibility, uptake and retention were recorded to assess feasibility. Qualitative interviews assessed acceptability of the intervention materials.

**Findings:** Recruitment and uptake were good, with 87% of eligible participants agreeing to take part. Around two thirds of participants recruited to the study completed the follow up questionnaires (66%). The qualitative interviews showed that the participants found the materials acceptable and helpful. Paired samples t-tests showed small improvements in adherence over time, as well as improvements in necessity and concern beliefs, personal control, coherence, distress, symptom experience and self-efficacy for managing side effects.

**Discussion:** The intervention booklet appears to be acceptable and feasible in this population and has the potential to improve both adherence rates and quality of life in breast cancer survivors prescribed tamoxifen. Larger scale trials are needed to establish the efficacy of the materials.

11:30 - 11:45

## Intervention development and tailoring using N-of-1 data: Improving photoprotection in patients with xeroderma pigmentosum

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**Background:** Tailored behaviour change interventions can result in greater effects. Most tailoring is based on between-participant factors like demographics and theoretical constructs (e.g., stage of change), although precision medicine using single-case data is increasing. Xeroderma pigmentosum (XP) is a very rare inherited disease, involving an inability to repair ultraviolet radiation (UVR)-induced damage and increased melanoma risk. Management involves rigorous protection from UVR. Small patient numbers mean that within-participant, individual-level personalisation is well-suited and feasible.

**Methods:** A mixed-methods phase of formative research (including N-of-1 studies over 7-weeks with 24 individuals) was undertaken in 2016-2017. The combined results alongside stakeholder involvement informed the design of a toolbox of manualised psychological interventions to improve photoprotection in XP using intervention mapping. N-of-1 data was used to provide personalised feedback on behaviour and psychological patterns, and to tailor the selection of modules (and application of content within) for each individual.

**Findings:** Correlates of photoprotection included social support, cue-based (time of day, weather, symptoms), belief-based (motivation, importance), self-regulatory (effort, barriers, planning), and emotional (e.g., stress, self-consciousness, mental exhaustion) variables. Patterns and direction of relationships varied across individuals, suggesting different strategies are needed to achieve change. These include encouraging self-regulation and non-contingent cues for habit formation, enhancing long-term and in-the-moment motivation, and managing emotional fluctuations.

**Discussion:** Including N-of-1 data in a mixed-methods approach to intervention development and dynamic multi-level tailoring allows for insights (researcher and participant) and decision-making not possible with cross-sectional quantitative or qualitative methods alone. This method may be of use in other rare conditions.

11:45 - 12:00

## Investigating behavioural mechanisms of Interventions Supporting Long-term Adherence and Decreasing cardiovascular events (ISLAND)

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**Background:** A multicentre, pragmatic, 3-arm randomised controlled trial was conducted to evaluate interventions to improve adherence to cardiac rehabilitation and medication after myocardial infarction. Participants were randomized to: 1) usual care; 2) a series of mail-outs; 3) a series of mail-outs, plus automated reminder telephone calls, and trained lay health worker telephone calls for participants identified as non-adherent. We investigated the effects of the interventions on the theory-based constructs hypothesized to explain behaviour change, informed by the Health Action Process Approach.

**Methods:** In this quantitative process evaluation, a random sample of trial participants were invited to complete questionnaires related to either/both cardiac rehabilitation completion and medication adherence: data pertaining to rehabilitation completion have been analysed. Intention, goal priority, outcome expectations, risk perception, self-efficacy, social support, action planning, and coping planning were assessed. We used multiple regression mediation models to explore whether interventions operated through these constructs.

**Findings:** 594/1162 process evaluation participants had questionnaire data pertaining to cardiac rehabilitation completion. There were significant indirect effects of trial arm 3 on intention (n=548) via goal priority (B=0.05, 95%CI 0.01-0.11), outcome expectations (B=0.04, 95%CI 0.01-0.08), risk perception (severity) (B=-0.02, 95%CI -0.06 to -0.01), and self-efficacy (B=0.09, 95%CI 0.03-0.17); as well as significant indirect effects on behaviour (rehabilitation completion) (n=580) via self-efficacy (OR=1.13, 95%CI 1.04-1.32) and action planning (OR=1.08, 95%CI 1.02-1.20). There were no significant indirect effects of trial arm 2.

**Discussion:** This theory-based process evaluation suggests that the intervention delivered in trial arm 3 influenced constructs hypothesised as mediators of cardiac rehabilitation completion.

12:00 - 12:15

## Diabetes REmission Clinical Trial (DiRECT) a Psychological Analysis

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**Aims:** The Diabetes Remission Clinical Trial (DiRECT) demonstrated that type 2 diabetes remission in adults cared for in primary care is possible through a 12-week total diet replacement (TDR) intervention (Lean et al 2018, Lancet). Here we briefly present the trial and its main outcomes and focus on the qualitative process evaluation.

**Methods:** A process evaluation within a ClusterRCT. For process evaluation participants were interviewed at baseline (T1), 6 weeks into the TDR (T2), and 2 weeks after food reintroduction (FR) (T3). Interviews were semi-structured, audio-recorded, transcribed verbatim, and analysed using Framework approach.

**Results:** Diabetes remission was achieved in 46% of participants in the intervention group (IG). 34 out of 149 of the IG were interviewed at T1, 27 follow-up (T2), and 25 at T3. Desiring normality in the form of normal blood glucose levels, BMI, or ability to wear normal clothes and eat normal food, were main drivers to taking part in the study. The TDR phase was perceived as challenging, but somewhat easier than anticipated. Willpower, use of behaviour-regulation strategies, social roles, behavioural independence, and social and clinical support were vital determinants of adherence. Both the TDR and FR stages required resolving cognitive and emotional goal conflicts. Transition to regular food was perceived as destabilising, and required increased effort, re-designing of one's "Foodrobe", and continuous support.

**Conclusion:** Understanding the strategies people have used to succeed in diabetes remission will be helpful to scale up the intervention and provide a viable option for diabetes remission at population levels.

12:15 - 12:30

## Robot-assisted therapy in chronic stroke patients: Adherence to at-home treatment recommendations

W. Bierbauer<sup>1,2</sup>, K. Baur<sup>3</sup>, J.E. Duarte<sup>3</sup>, U. Scholz<sup>1</sup>

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**Background:** Stroke patients often face reduced mobility and loss of upper extremity function. Robot-assisted therapy can help patients significantly improve functioning in their paretic arm. It remains unclear whether these improvements also translate into everyday life. This study investigates how stroke patients adhere to at-home treatment recommendations.

**Methods:** In cumulative N-of-1 trials adopting an A-B-A-B experimental design patients get both, solo robot-assisted therapy (A) and dyadic robot-assisted therapy (B). At-home arm activity is measured by wrist-worn accelerometry and related motivational, volitional and social variables are gathered in self-reports across five weeks on a daily basis.

**Findings:** In the first weeks with robot-assisted therapy, patients increased their participation in activities of daily living. Additionally, dyadic therapy was associated with increased paretic arm involvement in everyday life, thereby following treatment recommendations.

**Discussion:** Fostering daily at-home exercises of a paretic arm is an important goal in stroke rehabilitation. By examining the effects of different robot-assisted therapies on exercising behaviour, this study contributes to the optimization of the stroke rehabilitation process. N-of-1 trials can evaluate treatment effectiveness in a single individual, thereby helping to close the gap between evidence and practice. The aggregation of trial findings could inform treatment decisions for other patients unaffiliated with the trials.

# Stress: Cardiovascular physiology

11:00 - 12:30

Larmor

Andreas Schwerdtfeger

11:00 - 11:15

## Attachment, social support and cardiovascular reactivity in young adults

G. McMahon<sup>1</sup>, S. Gallagher<sup>1</sup>, A. Creaven<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Theoretical models of social support and attachment overlap substantially, however, few studies examining social support consider the role of attachment in moderating the impact of stress on health. We aimed to examine the role of social support and specific attachment bonds (i.e., mother, father, partner, best friend) on cardiovascular responses to stress.

**Methods:** A cross-sectional study was conducted on healthy students, recruited through an online credit system, from the University of Limerick (N = 131). Participants completed the Relationship Structures Questionnaire (RSQ) and Medical Outcomes Study- Social Support Survey (MOS-SSS). Measures of cardiovascular reactivity were continuously monitored throughout a standardised stress testing protocol, which included a baseline, an acute stress exposure.

**Results:** Preliminary results showed that insecure (anxious) attachment with a partner negatively predicted systolic (SBP) (B = -.24, p = .03) and diastolic (DBP) reactivity (B = -.15, p = .03) blood pressure, and insecure attachment with a best friend negatively predicted SBP reactivity (B = -1.31, p = .04). However, no association between parental attachment and cardiovascular reactivity was evident. Further analyses showed that social support significantly mediated the relationship between anxious attachment and both SBP (B = -.36, [-.13, -.04]) and DBP (B = -.31, [-.75, -.10]) reactivity, for best friends only.

**Conclusion:** These findings suggest that insecure attachment bonds among young adults are linked to a blunted (i.e., sub-normal) blood pressure response to stress, which can be damaging to health. The interrelationships between support and attachment in terms of the impact on health are discussed.



11:15 - 11:30

## Burnout: Merely a subjective complaint?

C. Traunmüller<sup>1</sup>, R. Stefitz<sup>1</sup>, A. Schwerdtfeger<sup>1</sup>

<sup>1</sup>University of Graz/Health Psychology, Austria

**Background:** There is evidence that chronic stress and burnout could negatively impact physical and mental health and dampen heart rate variability (HRV). This study investigated HRV in relation to varying degrees of burnout, which was assessed with the Maslach Burnout Inventory (MBI-GS). Emphasis was placed on parasympathetic activity as indicated by the root mean square of successive normal interbeat-interval differences (rMSSD).

**Methods:** A total sample of 105 individuals aged between 28-60 years (M: 42.7, SD 7.75), who were working under high demanding conditions, participated in this study. 33 participants reported low, 35 reported middle and 37 reported high degrees of burnout. They underwent a 24 hours ECG monitoring two times within a week and rMSSD was derived from time domain HRV analysis. In addition, alternative indices of HRV in the frequency domain and the cortisol awakening response were assessed.

**Results:** RMSSD was significantly lower in the high burnout group compared to the low burnout group. Furthermore, a discriminant function analysis on the basis of cardiac and neuroendocrine variables suggested two subgroups within the high burnout individuals. Although both groups could be characterized by high levels of burnout, only one group showed evidence for autonomic dysfunction as indicated by lower vagal efference.

**Conclusion:** Results suggest the usefulness of physiological variables to the assessment of burnout. Specifically, analyzing ambulatory HRV could be especially promising to differentiate subjective burnout symptoms from a burnout syndrome affecting also physiological function.

**Keywords:** autonomic nervous system dysfunction, burnout, cortisol, parasympathetic activity

11:30 - 11:45

## Physical activity effects on HPA and ANS axis response to acute psychosocial stress

K. Wunsch<sup>1,2</sup>, N. Kasten<sup>3</sup>, R. Wurst<sup>2</sup>, B. von Dawans<sup>3</sup>, J. Strahler<sup>4</sup>, R. Fuchs<sup>2</sup>

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<sup>4</sup>Justus Liebig University Giessen, Germany

**Background:** The cross-stressor-adaption (CSA) hypothesis postulates that regular engagement in physical activity leads to adaptations in stress-response systems and therefore to a reduced sensitivity to subsequent stressors. This hypothesis was also examined for a single bout of exercise. However, results remain inconclusive. The current study aimed to investigate effects of habitual and acute activity in a psychosocial stress paradigm.

**Methods:** 84 high or low active male participants volunteered in the study. Subjects were randomized into an intervention group (30 minutes of moderate-to-high intensity ergometer bicycling), or a control group (same amount of light stretching). Subsequently, participants completed the Trier Social Stress Test for Groups (TSST-G). Salivary alpha amylase (sAA) and salivary cortisol (sCort) were measured repeatedly as stress-specific parameters of autonomic nervous system &#40;ANS&#41; and hypothalamus pituitary adrenal (HPA) system. A multilevel growth curve approach was applied to analyse changes over time.

**Findings:** Results revealed significant effects for both acute and habitual activity on sCort and sAA reactivity due to stress exposure. In particular, habitual activity showed a significant effect on peak sCort and recovery while acute physical activity was unrelated. Habitual and acute activity negatively predicted sCort activation slopes. Only acute physical activity predicted sAA response and recovery.

**Discussion:** Results confirm the CSA hypothesis regarding reactivity and stress reaction for habitual activity, but showed only marginal effects for acute activity. Therefore, people should engage in regular activity to profit from best advantages. However, even acute bouts of activity preceding stress exposure showed to have beneficial effects on stress reactivity.

11:45 - 12:00

## What is the role of cardiovascular reactivity (CVR) in health behaviour change?

A. Cross<sup>1</sup>, D. Sheffield<sup>1</sup>, F. Naughton<sup>2</sup>

<sup>1</sup>University of Derby, United Kingdom

<sup>2</sup>University of East Anglia, United Kingdom

**Background:** The stress reactivity hypothesis posits that exaggerated cardiovascular reactivity (CVR) to stress may lead to hypertension and other cardiovascular disease outcomes. Additionally, low or blunted CVR may be a marker of motivational dysregulation. The role of cardiovascular reactivity as a predictor of health behaviour change is less understood and a systematic review is required to guide intervention development as well as our understanding of the modifiable determinants of health behaviour.

**Methods:** A systematic review (PROSPERO CRD42017073485) was conducted to determine the association between cardiovascular reactivity (CVR) and health behaviour change.

**Findings:** Nine studies of smoking and alcohol relapse (k=6) and weight changes (k=3) were entered into meta-analysis (n=1185), which showed that exaggerated CVR responses predict relapse and weight increases (Hedges' g 0.38, 95% CI 0.06-0.70, p< 0.01). However, there was a large amount of heterogeneity, I<sup>2</sup> = 66%. The weight loss studies (n=708) showed small, non-significant and heterogeneous effects (Hedges' g 0.17, 95% CI -1.09-1.43, p> 0.1, I<sup>2</sup> = 73%), whereas the five studies focusing on smoking relapse (n=424) found high CVR predicted relapse (Hedges' g 0.41, 95% CI 0.08-0.74, p< 0.01, I<sup>2</sup> = 12%).

**Discussion:** The review suggests that exaggerated CVR responses to acute psychological stressors are associated with relapse and less successful behaviour change. Since CVR shows some promise as a modifiable determinant of health behaviour change, further studies are required to explore the association between CVR and behaviour change across other health behaviours.

12:00 - 12:15

## Does the nature of the stress task influence the relationship between reappraisal and cardiovascular reactivity?

S.M. Griffin<sup>1</sup>, S. Howard<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Reappraisal is associated with a “healthful” cardiovascular response pattern to passive stressors, indicated by lower sympathetic reactivity. Few studies examine reappraisal and cardiovascular reactivity to active stressors. Using a within-subjects design this study examined the relationship between trait reappraisal and stress responsivity to an active and passive stress task.

**Methods:** 19 young adults (M = 20.26, SD = 13.37) completed two laboratory visits, consisting of a 20-minute acclimatization period, 10-minute baseline, and 5-minute task. During the first visit participants completed a speech task while being video-recorded. Participants watched this recording at visit two; this acted as a novel passive stressor. The Finometer Pro measured blood pressure throughout. The Emotion Regulation Questionnaire assessed reappraisal.

**Preliminary findings:** For each task a 2 × 1 ANCOVA was conducted. The within-subjects factor was phase; baseline and task. Reappraisal scores were entered as a covariate. There was a Phase × Reappraisal interaction effect for SBP for the active and passive task (p = .012 and p = .048). This was also found for DBP and CO for the active task (p = .028 and p = .045), but not for the passive task, all p's > .05. Reactivity scores were positively correlated with reappraisal, all r's > .464.

**Discussion:** While reappraisal was associated with greater SBP reactivity in both tasks, there was only an association between reappraisal and DBP and CO reactivity to the active task. This study demonstrates that for high reappraisers there are differences in stress responsivity to active and passive tasks.

12:15 - 12:30

## Momentary feelings of resilience are associated with vagal withdrawal to episodes of stress in firefighters

A. Schwerdtfeger<sup>1</sup>, K. Dick<sup>2</sup>

<sup>1</sup>University of Graz, Austria

<sup>2</sup>University of Wuppertal, Germany

**Background:** Resilience is discussed to constitute a protective buffer against stress, thus fostering health and wellbeing. Although resilience is assumed to encompass a relatively stable set of positive attitudes, it might fluctuate within persons across situations.

**Methods:** This study aimed to assess resilience both via traditional questionnaire (RS-25; Wagnild & Young, 1993) and in everyday life on a momentary basis using 4 items of the RS-25, and to relate these measures to autonomic functioning (heart rate variability, HRV) in 38 male firefighters (mean age: 32.7 years) during a weekday. Stressful episodes (e.g., rescue service, emergency operations, working with self-contained breathing apparatus; 40.2% of the operations), non-stressful episodes (e.g., equipment maintenance, routine missions; 59.8% of the operations), work at the firestation (e.g., administrative duties), and a standardized baseline of 10 minutes duration were coded during 24 hours. Momentary negative affect, resilience, and HRV (both in the time and frequency domain) were recorded via ecological momentary assessment multiple times. Bayesian multilevel modeling was applied.

**Findings:** On average, participants completed 16 prompts across the 24 hours period (12% during highly stressful episodes). Questionnaire-assessed resilience was significantly positively associated with aggregated momentary resilience ( $r = .58$ ,  $p < .001$ ), but unrelated to HRV in daily life. However, controlling for multiple confounders (e.g., age, smoking, bodily movement, waist-to-height ratio) momentary resilience was associated with attenuated HRV during stressful encounters only. **Discussion:** The findings suggest that momentary feelings of resilience are accompanied by a vagal withdrawal to stress, possibly indicating an adaptive response.

# Alcohol and smoking public health interventions

11:00 - 12:30

Room 201

Felix Naughton

11:00 - 11:15

## Improving behavioral support for smoking cessation in pregnancy: Application of Theoretical Domains Framework.

K.A. Campbell<sup>1</sup>, L. Fergie<sup>1</sup>, T. Coleman-Haynes<sup>1</sup>, F. Lorencatto<sup>2</sup>, M. Ussher<sup>3,4</sup>, J. Dyas<sup>1</sup>, S. Cooper<sup>1</sup>, T. Coleman<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

<sup>2</sup>University College London, United Kingdom

<sup>3</sup>St George's University of London, United Kingdom

<sup>4</sup>University of Stirling, United Kingdom

**Background:** Behavioral support interventions are used to help pregnant smokers stop; however, of those tested, few are proven effective. A systematic research to identify and develop pregnancy-specific behavior change techniques (BCTs) is ongoing. This initial work aimed to identify potentially-effective BCTs and relate them to important barriers and facilitators (B&Fs) to smoking cessation in pregnancy, using appropriate theory, to identify areas for which BCTs should be tailored or developed.

**Methods:** A Nominal Group Technique with smoking cessation experts (n=12) elicited an expert consensus on which B&Fs most influence women's smoking cessation and are most modifiable through behavioral support. Effective cessation interventions were identified from randomized trials included in a recent Cochrane review. Intervention descriptions were coded into component BCTs using existing taxonomies. B&Fs were categorized into the Theoretical Domains Framework (TDF) domains and matrices mapping BCT taxonomies against TDF domains were consulted to investigate the extent to which BCTs in existing interventions target key B&Fs.

**Results:** Experts ranked 'smoking being a social norm' and 'quitting not being a priority' as most important/difficult to address barriers and 'desire to protect the baby' as an important facilitator to quitting in pregnancy. Twenty-three potentially-effective BCTs were identified in 14 trials (e.g. 'information about consequences', 'credible source'). Most B&Fs fell into 'Social Influences', 'Knowledge', 'Emotions' and 'Intentions' domains; few potentially-effective BCTs mapped onto each domain.

**Discussion:** B&Fs identified by experts as important to cessation, are not sufficiently targeted by BCT's currently within interventions for smoking cessation in pregnancy.

11:15 - 11:30

## Establishing ways to improve smoking cessation behavioural support for pregnant women: A modified Delphi survey

L. Fergie<sup>1,2</sup>, K. Campbell<sup>2</sup>, M. Ussher<sup>3</sup>, T. Coleman-Haynes<sup>2</sup>, S. Cooper<sup>2</sup>, T. Coleman<sup>2</sup>

<sup>1</sup>Ms, United Kingdom

<sup>2</sup>University of Nottingham, United Kingdom

<sup>3</sup>St George's University of London, United Kingdom

**Background:** Smoking in pregnancy is an ongoing public health concern. Pregnant women can experience barriers hindering or facilitators enabling cessation attempts. We sought consensus on how influential pre-identified barriers and facilitators (B&Fs) can be on pregnant women's smoking behaviour, how difficult managing these might be for cessation advisors, and which behavioural change techniques (BCTs) could help.

**Methods:** 80% (44 of 55) cessation advisors with expertise in supporting pregnant women, completed a three-round modified Delphi survey. Round 1 sought consensus on 'influence' and 'difficulty' of 34 B&Fs identified from the literature, and generated ideas for BCTs. Round 2 sought further consensus for B&Fs and also on 'appropriateness' of generated BCTs. Round 3 sought further consensus on all three aspects. The 14 domains of the Theoretical Domains Framework (TDF) were used to map the BCTs to relevant B&Fs.

**Findings:** 27 B&Fs reached consensus as being 'influential', 19 'easy' and one 'difficult' to address. 50/54 generated BCTs reached consensus on being 'appropriate' for use in practice. The consensus reaching B&Fs for all three aspects mainly related to 'social influences' (e.g. un/supportive partners), 'knowledge' (e.g. poor understanding of the risks), and 'intentions' (e.g. women don't necessarily see quitting smoking as a priority). The BCTs considered appropriate related to nine aspects: 'partners & family influence', 'stress & mental well-being', 'motivation & self-efficacy', 'risks & benefits', 'NRT', 'social support', 'problem solving', 'building rapport', and 'tailoring the intervention'.

**Discussion:** These findings will be used to inform and enhance existing NHS behavioural cessation support for pregnant women.



11:30 - 11:45

## Improving school health education on alcohol and tobacco for low-educated adolescents: Overview of nine experiments.

B. van den Putte<sup>1,2</sup>, S. Zebregs<sup>1</sup>, A. de Graaf<sup>3</sup>, P. Neijens<sup>1</sup>

<sup>1</sup>University of Amsterdam, Netherlands

<sup>2</sup>Trimbos Institute, Netherlands

<sup>3</sup>Radboud University Nijmegen, Netherlands

**Background:** Adolescents at lower-educational levels use more tobacco and alcohol than adolescents at higher-educational levels. One cause may be that current health educational materials are generally less effective for lower-educated students, because they insufficiently take into account their on average lower information processing capacity. To improve effectiveness, we compared seven formats that – e.g., by influencing involvement and imagery – differed in required cognitive effort and processing motivation.

**Methods:** Nine experiments were conducted, each comparing two formats for either alcohol or tobacco. Most experiments were three-wave longitudinal with the intervention between the first and second wave. Between 225 and 324 participants completed all waves. Main dependent variables were knowledge about consequences, attitude, and intention.

**Findings:** Overall, it was found that there was a short term knowledge increase among adolescents with less baseline knowledge. Regarding alcohol, attitude became more negative among adolescents who were more positive towards alcohol at baseline. All effects disappeared within a month. There were no effects on alcohol intention. Importantly, the format did not matter. Results were largely identical for print and audiovisual versions, as well as for informational and narrative versions. Adding testimonials of adolescents to the print and audiovisual informational formats did not make a difference. Regarding tobacco, attitude became most negative towards smoking for the audiovisual informational format. Testimonials increased intention to smoke.

**Discussion:** The immediate effects on knowledge and attitude, disappearing within a month, suggest that repetition of education might be a key to more success. Repetition might also help to influence intention.

11:45 - 12:00

## Self-efficacy mediates effects of multilevel, pediatric-office based intervention on bioverified smoking cessation among low-income parents

S. Lepore<sup>1</sup>, B. Collins<sup>1</sup>, D. Coffman<sup>1</sup>

<sup>1</sup>Temple University, United States

**Background:** The health burden of child tobacco smoke exposure (CTSE) is greatest in low-income, minority communities. Guided by the Behavioral Ecological Model and Social Cognitive Theory, we addressed this problem using a multilevel intervention combining pediatrician advice with telebased counseling aimed at reducing low-income parents' smoking.

**Methods:** The Kids Safe & Smokefree (KiSS) randomized controlled trial (N = 327) had two-groups and three epochs: pre-intervention, end-of-treatment (EOT) and 12-month follow-up. All parents attending participating pediatric clinics received a brief intervention: Following prompts in electronic health record systems, pediatricians "Asked" parents about CTSE, "Advised" about CTSE harms, and "Referred" smoking parents to cessation resources. After baseline assessment, smoking parents were randomized to a tele-based intervention that used support, education and cognitive-behavioral skill building to control smoking (COUNSELING) or to an attention control group (CONTROL). This paper examines heretofore unreported findings on mediators of the KiSS intervention on 12-month, 7-day point prevalence smoking abstinence, verified by salivary cotinine.

**Findings:** Participants were mostly African American (84%), female (84%) and living in poverty (79%). Intention-to-treat analyses showed the COUNSELING group was 2.46 times more likely to have quit than CONTROLS ( $p < .05$ ) at 12-months. Further, relative to CONTROLS, the COUNSELING group reported higher levels of efficacy to quit smoking at EOT which, in turn, was associated with a higher probability of quitting at 12-month follow-up.

**Discussion:** These findings suggest that relative to clinic intervention alone, the multilevel KiSS intervention effectively helps low-income parents to quit smoking for the long-term, potentially by improving their self-efficacy.

12:00 - 12:15

## Dry January - enhancing the experience and benefits of temporary alcohol abstinence

R. de Visser<sup>1</sup>

<sup>1</sup>University of Sussex, United Kingdom

**Background:** Dry January is an annual UK campaign designed to encourage a month without alcohol, and help people to re-evaluate their relationship with alcohol and their control over their alcohol use.

**Methods:** People registering for Dry January could opt-in to complete online questionnaires. 2568 respondents completed the follow-up online questionnaire at the end of Dry January. Data were weighted to adjust for differential attrition according to baseline characteristics. Individual interviews were conducted with 20 people reporting different levels of engagement with the support provided by Dry January.

**Findings:** 60% completed the abstinence challenge. Within-subjects analyses revealed increases in DRSE and changes in some domains of Drinking Motives. When asked what benefits they had experienced, 72% reported better general health, 72% reported better sleep, 67% reported more energy, 59% reported better concentration, and 56% reported losing weight. Respondents also reported that taking part in Dry January had encouraged them to think more about their relationship with alcohol (83%), and to feel more in control of their drinking (79%). These reported gains were most obvious among those who stayed dry during January. Quantitative and qualitative data identified the most helpful sources of support and how best to encourage participation and successful participation.

**Discussion:** Dry January helps people to develop the skills, attitudes, and confidence required to better manage their alcohol use. This study has provided information for how to engage more people with the campaign, and to increase people's chances of experiencing the benefits that come with completing Dry January.

12:15 - 12:30

## Evaluating reach of the Smoking Treatment Optimisation in Pharmacies (STOP) intervention using simulated smoker feedback

S. Jumbe<sup>1</sup>, C. Houlihan<sup>1</sup>, W.Y. James<sup>1</sup>, R. Walton<sup>1</sup>

<sup>1</sup>Queen Mary University of London, United Kingdom

**Introduction:** Community pharmacies offering NHS smoking cessation services are experiencing low smoker uptake. The Smoking Treatment Optimisation in Pharmacies (STOP) programme aims to address this by developing and testing impact of a behaviour change training intervention for pharmacy staff, implemented in 30 out of 60 pharmacies across England and Wales.

**Aim:** To assess the reach of the STOP intervention and effects on smoker engagement by staff.

**Method:** We sent actors posing as smokers to interact with staff in participating pharmacies. Actors recorded presence or absence of elements of the intervention using a fidelity checklist and made contemporaneous notes on staff behaviour. We carried out thematic analysis of actors' field notes from pharmacies with the highest and lowest proportion of STOP trained staff members to assess effects of intervention reach on smoker engagement. Reach was defined as the proportion of staff in each pharmacy that consented to STOP participation.

**Results:** Pharmacies with a higher proportion of STOP trained staff members had higher fidelity assessment scores. Based on actors' Likert scale fidelity assessment scores and comments, counter staff in pharmacies with low intervention reach had lower ratings of confidence when approaching and talking to simulated smokers about smoking. This resulted in missed opportunities for smoker recruitment.

**Conclusions:** The reach of the STOP intervention was related to smoker engagement behaviour of pharmacy staff which we assessed using simulated smokers. Assessing the effects of intervention reach can provide detailed insight into how and why an intervention is effective, limited or ineffective.

# STATE OF THE ART: Self-regulation in sickness and in health

14:00 - 15:30

O'Flaherty

Pamela Rackow

14:00 - 14:45

## Self-regulation in Sickness and in Health

### State of the Art

M. Hagger<sup>1</sup>, S. Orbell<sup>2</sup>

<sup>1</sup>Curtin University, Australia

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A cursory overview of topics attracting maximal attention in health psychology research might suggest that the field is concerned only with health behaviour change related to disease prevention, and wellbeing in chronic disease. Yet there is a current world crisis in over-use of antibiotics, a substantial proportion of medical consultant appointments concern medically undiagnosed syndromes, access to e-information and vulnerability to e-promotion of pharmaceutical remedies is growing, patients are faced with increasingly complex informed decision making regarding their treatments, and the population is ageing.

The recognition of a state of illness in the self is one of the most fundamental psychological tasks of illness self-regulation. Does current evidence provide definitive answers to understanding the cognitive and motivational processes that guide the recognition of illness, or how these processes of recognition and interpretation of illness are acquired, or how they change across the lifespan and impact upon recognition of disease? How do these processes lead to self-regulation efforts that compromise or promote health in acute and in chronic illness?

This state of the art presentation will: a) provide an overview of research in self regulation of illness drawing upon a recent comprehensive meta-analytic review conducted by the presenters (Hagger et al, 2017: Psychological Bulletin); b) suggest developments to existing theories and methods that are needed to advance theory and explanatory power in research concerning self regulation of illness. These include recognition of the distinction between beliefs about illness and beliefs about behaviour (treatment and coping responses) and consideration of a dual process approach to theorising; c) show how health psychology research might be more involved in public health intervention that is concerned with responses not only to threat amongst those who are healthy but may become ill, but also with responses to threat represented by illness itself.

14:45 - 15:00

## Children's psychological health as a predictor of sedentary time and physical activity

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**Background:** Physical activity is beneficial for psychological health. Equally plausible, but less examined, is the idea that psychologically healthy children do more physical activity. Moreover, it is less known how psychological health influences sedentary behaviour; a behaviour independent of physical activity, yet linked to non-communicable disease. Hence, the present study longitudinally investigated the relationship between children's psychological health and objectively assessed moderate-to-vigorous physical activity (MVPA) and sedentary time. Psychological health was conceptualised as the satisfaction of three psychological needs for autonomy, competence, and relatedness.

**Methods:** 168 children (11- 12-years; 55 percent female) reported their psychological need satisfaction and were asked to wear an accelerometer for seven days at three time points approximately six months apart. Multilevel modelling was employed to explore individual differences (i.e., comparisons across the sample) and within-person changes (i.e., fluctuations around a child's average).

**Findings:** Lower relatedness ( $b = -133.520$ ,  $p = .03$ ) and higher autonomy ( $b = 141.12$ ,  $p = .02$ ) satisfaction was associated with more sedentariness. An increase in boys' relatedness satisfaction was associated with reduced time spent sedentary (boys:  $b = -202.75$ ,  $p < .002$ ; girls:  $b = -6.29$ ,  $p = .93$ ). No relationships were observed between psychological need satisfaction and MVPA.

**Discussion:** Social connection maybe an important predictor of lower sedentary behaviour. Of importance for intervention, enhancing boys' feelings of connection may reduce sedentary behaviour. The positive relationship between autonomy and sedentariness is intriguing because it conflicts psychological health with healthy behaviour. No evidence was found for links between psychological health and physical activity.

15:00 - 15:15

## Side-effects, illness and treatment beliefs predict distress at 12 months in women prescribed tamoxifen

L. Hughes<sup>1</sup>, N. Askaroff<sup>1</sup>, R. Moss-Morris<sup>1</sup>, M. Hunter<sup>1</sup>, Z. Moon<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom

**Background:** Although breast cancer survivorship is improving, up to 48% of women experience high depression and/or anxiety within the first year of primary treatment. However, there is little understanding of the mechanisms contributing to psychological comorbidity.

**Methods:** This is a prospective 12 month observational study of women within the first year of primary treatment. Questionnaires including the illness perceptions questionnaire (IPQ-BCS), beliefs about medications and hospital anxiety and depression scale were completed at baseline and 12 months. Hierarchical multiple regression analyses were used to predict anxiety and depression.

**Findings:** Of 345 women recruited, 258 (74.8%) completed follow-up questionnaires. At baseline, 16% had depression scores of  $\geq 8$  and 39% had anxiety scores of  $\geq 8$ , which did not change significantly.

At baseline, 55% of the variance in anxiety was explained ( $F(20,274)=16.454, p<0.001$ ). Stronger beliefs in emotional causes of cancer, higher consequences and emotional representations were related to higher anxiety. At 12 months, 58% of the variance in anxiety was explained ( $F(16,224)=18.92, p<0.001$ ) with baseline anxiety and greater tamoxifen side-effects predicting greater anxiety.

59% of the variance in depression was explained at baseline ( $F(20,247)=17.96, p<0.001$ ). Higher consequences, identity and psychological causes; lower health behaviour causes and lower tamoxifen side-effects were related to higher depression. At 12 months, the overall model explained 60% of the variance ( $F(18,187)=15.82, p<0.001$ ) with higher baseline depression, tamoxifen side-effects and identity scores predicting higher depression.

**Discussion:** A significant proportion of women initiating tamoxifen experience depression and anxiety which are related to side-effects, perceived consequences and emotional reactions. These results suggest areas for intervention.



15:15 - 15:30

## Attention in asthma: Cognitive bias towards health-threat in depressed mood and avoidance in neutral mood.

I. Alexeeva<sup>1</sup>, M. Martin<sup>1</sup>

<sup>1</sup>University of Oxford, United Kingdom

**Background:** Attentional biases have been observed in populations with psychological disorders but have been under-investigated in populations with physical illnesses. This study investigated potential attentional biases in asthma as a function of mood. Attentional bias involves amplified attentional focus on potential threat. The study aimed to assess the direct effect of depressed mood on attention towards health-threat in asthma.

**Method:** Asthma (N = 45), and healthy (N = 39) participants were randomly allocated to a depressed or a neutral mood state induction. After the induction they completed a visual probe task that assessed participants' reaction times to health-threatening and neutral pictures and words.

**Findings:** Induced depressed mood exerted a significant influence on attention in the asthma group, as demonstrated by a significant group by mood interaction  $F(1,80) = 9.46$ ,  $P = 0.003$ . Compared to the healthy controls, the asthma group demonstrated attentional bias towards health-threat pictures in depressed mood,  $P = 0.037$ , and attentional avoidance of health-threat pictures in neutral mood,  $P = 0.010$ .

**Discussion:** Compared to the healthy controls, the asthma group showed attentional bias towards health-threat pictures in depressed mood, and attentional avoidance of health-threat pictures in neutral mood. These cognitive biases, not found in the healthy controls, may underpin the mechanisms underlying symptom over- and under-perception, respectively. Cognitive interventions may benefit asthma patients by improving symptom perception accuracy, counteracting depressed mood, aiding in the control and management of asthma symptoms, and improving adherence to prescribed medication.

# Sex, drugs and alcohol

14:00 - 15:30

Room 201

Richard Cooke

14:00 - 14:15

## Applying an extended RAA to inform future tailored condom use interventions for 'at-risk' older men

J. MacDonald<sup>1</sup>, K. Lorimer<sup>1</sup>, C. Knussen<sup>1</sup>, P. Flowers<sup>1</sup>

<sup>1</sup>Glasgow Caledonian University, United Kingdom

**Background:** A major challenge for future governments is helping people maintain and improve their health as they age. This challenge extends to sexual health; important across the lifespan. UK surveillance data show a rise in sexually transmitted infections/HIV among older adults. Online dating may be implicated in this increase, suggesting those dating online may benefit from intervention. Two studies of two groups of 'at-risk' older men applied an extended RAA to: (1) predict condom use intentions; (2) identify key beliefs underlying RAA predictors; (3) explore suitability of key beliefs and non-RAA predictors as intervention targets.

**Methods:** Two cross-sectional, population-specific online surveys. UK-based sexually active single heterosexual men [HM] (n=97) and men who have sex with men [MSM] (n=104) aged 45+ years and seeking a new sexual partner(s) online were recruited through Facebook. Participants completed measures of direct and belief-based RAA constructs, anticipated regret, moral norm [MN], self-identity, future time perspective, and past behaviour. Hierarchical regression, correlational, and descriptive analyses were undertaken.

**Findings:** The model accounted for 77.5% (HM) and 80.2% (MSM) of variance in condom use intentions. MN, experiential attitude, anticipated regret, and past behaviour were significant independent predictors among HM, and self-identity, capacity, and MN for MSM. Four key behavioural (HM) and four key control (MSM) beliefs were associated with condom use intention ( $r \geq .50$ ). Five and four optimal intervention targets arose for HM and MSM, respectively.

**Discussion:** Findings will enable theoretically-driven, empirically-based future tailored condom use intervention development. Behaviour change techniques mapping to the optimal intervention targets are proposed.

14:15 - 14:30

## Barriers and facilitators to chlamydia testing: A qualitative exploration and application of a theoretical model

L. McDonagh<sup>1</sup>, H. Harwood<sup>2</sup>, J. Saunders<sup>3</sup>, J. Cassell<sup>4</sup>, G. Rait<sup>1</sup>

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<sup>3</sup>Public Health England, United Kingdom

<sup>4</sup>University of Brighton, United Kingdom

Young people aged 15-24 years are most at risk of chlamydia infection. Young people have reported a preference to receive testing and testing results from a general practitioner. Hence, general practice may be an ideal setting to increase testing and prevent transmission. The aim of this study was to explore barriers and facilitators to chlamydia testing in general practice for young people. The Capability, Opportunity, and Motivation Model of Behaviour (COM-B) model was used as a theoretical framework to further explore the underpinnings of chlamydia testing behaviour.

Semi-structured, individual interviews were conducted with 27 young people. Interviews were audio recorded and transcribed verbatim. Data were analysed using thematic analysis within the COM-B framework.

Barriers to testing discussed were: lack of information and awareness regarding chlamydia transmission and what testing/treatment involved (psychological capability); beliefs regarding perceived risk (reflective motivation); personal embarrassment (automatic motivation); social stigma associated with chlamydia (social opportunity); and inconvenient general practice opening hours (physical opportunity). Facilitators to testing raised were: increased awareness (psychological capability) via well displayed posters and leaflets; framing test offers as moral responsible acts to engage in (reflective motivation); non-judgemental, friendly, and reassuring staff who offer testing as part of all consultations (social opportunity); flexible general practice opening hours and discrete modes of testing (physical opportunity).

The findings of this study highlight key areas to be targeted in future interventions to improve young people's sexual health. Study limitations, as well as clinical and policy implications will be discussed.

14:30 - 14:45

## Regret from inebriated social interactions and sexual encounters to reduce young adults' binge drinking behaviour.

J. Crawford<sup>1</sup>, R. Cooke<sup>2</sup>

<sup>1</sup>Aston University, United Kingdom

<sup>2</sup>University of Liverpool, United Kingdom

Young people in the UK frequently engage in binge-drinking (i.e., drinking above government recommendations). Binge-drinking could be reduced by reminding young people that they often regret their inebriated sexual (i.e. having a one-night stand) or social behaviours (i.e., text messaging when drunk). In this study regret was made salient by presenting participants with messages that either highlighted the sexual/social gains associated with not binge-drinking or the social/sexual losses associated with binge-drinking.

Participants (N = 83, 69 females), aged 18 to 24 (M = 19.78, SD = 1.72) reported their binge-drinking episodes (drinking more than 14 units of alcohol) over the past week and their binge-drinking intentions, before being randomly assigned to view one of four health persuasion messages that varied by message-frame (gain/losses) and type (sexual/social). After viewing the messages, participants reported their binge-drinking intentions, and were contacted two-weeks later to report their binge-drinking episodes.

Participants reported significantly lower intentions to binge-drink after viewing the messages,  $F(1, 79) = 26.37, p < .001$ ; however there was no main effect of message-frame or type and no significant interaction terms. For binge-drinking episodes, there was a main effect of message-type,  $F(1, 56) = 4.10, p = 0.48$ ; participants viewing social messages reported significantly fewer episodes than participants viewing sexual messages. There was no main effect of message-frame and no significant interaction terms.

This study demonstrates that messages evoking anticipated regret from alcohol-related social and sexual behaviours reduced young adults' binge-drinking intentions and more specifically, messages targeting social consequences of binge-drinking reduced reported binge-drinking episodes.

14:45 - 15:00

## Predicting alcohol consumption among European university students

R. Cooke<sup>1</sup>, F. Beccaria<sup>2</sup>, J. Demant<sup>3</sup>, M. Fernandes-Jesus<sup>4</sup>, L. Fleig<sup>5</sup>, U. Scholz<sup>6</sup>, R. de Visser<sup>7</sup>

<sup>1</sup>University of Liverpool, United Kingdom

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<sup>4</sup>ISCTE, University of Lisbon, Portugal

<sup>5</sup>Freie Universität Berlin, Germany

<sup>6</sup>University of Zurich, Switzerland

<sup>7</sup>University of Sussex, United Kingdom

**Background:** Various demographic, psychological and social variables have been identified as predictors of university students' alcohol consumption. However, because studies typically measure different variables, it is unclear which variables predict alcohol consumption after controlling for the effects of other variables. The aim of this study was to compare prediction of alcohol consumption using a large set of predictor variables.

**Methods:** 1249 university students from six European countries completed an online survey at baseline and 6-months later. At baseline, participants completed measures of demographic (e.g., age, gender), psychological (e.g., Anticipated Regret, Intentions) and social variables (Descriptive Norms, Prototypes) and reported their alcohol consumption in the past week. 6-months later, participants reported their alcohol consumption in the past week.

**Findings:** A linear regression accounted for 30% of the variance in 6-month alcohol consumption. Six significant predictors were identified: Higher baseline alcohol consumption (beta = 0.32,  $p < .001$ ); Viewing yourself as dissimilar to the prototypical abstinent drinker (beta = -0.11,  $p < .01$ ); Older age (beta = 0.11,  $p < .001$ ); Male gender (beta = -0.12,  $p < .01$ ); Perceiving that your peers consume lots of alcohol on a typical drinking day (beta = 0.10,  $p < .001$ ); Viewing yourself as similar to the prototypical binge drinker (beta = 0.11,  $p < .01$ ).

**Discussion:** Interventions to reduce university students' alcohol consumption should focus on challenging stereotypes around university students typically engaging in heavy alcohol consumption as well as encouraging negative perceptions of prototypical binge-drinkers and positive perceptions of abstinent drinkers.

15:00 - 15:15

## Intention to reduce drinking and preferred sources of support: an international cross-sectional study

E. Davies<sup>1</sup>, L. Maier<sup>2</sup>, A. Winstock<sup>3</sup>, J. Ferris<sup>4</sup>

<sup>1</sup>Oxford Brookes University, United Kingdom

<sup>2</sup>University of California, United States

<sup>3</sup>University College London, United Kingdom

<sup>4</sup>University of Queensland, Australia

**Background:** This study aimed to compare alcohol consumption and intention to reduce drinking across 25 countries. In addition, differences in preferred sources of support to reduce drinking were investigated among those who plan to seek help by gender, age, AUDIT scores, employment status and mental health.

**Methods:** The Global Drug Survey (GDS) is a large anonymous cross-sectional web survey. This paper includes data from 96,450 respondents from 25 countries (67.8% male) who reported the use of alcohol consumption in the last 12 months prior to the survey, collected during November and December 2016 (GDS2017).

**Findings:** Overall, 34.7% of respondents said they would like to drink less alcohol in the next 12 months; 7.4% said they would like help to drink less. Intentions to drink less were associated with being older, higher AUDIT scores, education to degree level, being employed and being on medication for a mental health condition. Intention to seek help to drink less was associated with being older, higher AUDIT scores, and being on medication for a mental health condition. Choosing online tools for support was associated with lower AUDIT scores and mental health. Choosing counselling from a specialist doctor was associated with higher AUDIT scores and mental health.

**Discussion:** Although over a third of the sample intended to reduce their drinking, only a small proportion wanted help to do so. Despite the growth in popularity of online tools, high risk drinkers may be better helped to reduce their drinking through improved access to specialist counselling.

# e/m health applications for smoking & alcohol

15:30 - 17:00

Jane Walsh



15:30 - 17:00

## Does smoker profile determine adoption of a decision aid to improve evidence-based cessation support uptake?

T. Gültzow<sup>1</sup>, E. Smit<sup>2</sup>, R. Hudales<sup>1</sup>, C. Dirksen<sup>1</sup>, C. Hoving<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>University of Amsterdam/ASCoR, Netherlands

**Background:** Using evidence-based smoking cessation support tools can double the chances of quitting, but uptake is low. An online decision aid can help smokers choose the right tool, but it is unclear whether and which types of smokers are interested in such a decision aid. We aimed to identify smoker profiles and investigate their influence on intention to use a proposed online decision aid.

**Methods:** A cross-sectional study involving 200 smokers was conducted to perform hierarchical cluster analysis based on health locus of control and decision-making style. Subsequently, clusters were compared on several characteristics, such as smoking behaviour and intention to use a decision aid in the future, by employing independent-samples t-tests, Mann-Whitney U tests and linear regression analyses.

**Findings:** Two clusters were identified; intenders and non-intenders. Clusters differed in terms of the clustering variables; decision-making style and health-locus of control. Additionally, they differed on autonomous motivation, attitude regarding smoking cessation support, the time elapsed since their last cessation attempt and their intention to use a decision-aid. Cluster membership significantly predicted intention to use a decision aid in the future,  $F(1, 198) = 9.931, p < .002, \text{adj. } R^2 = .048$ .

**Discussion:** Intenders were less likely to make intuitive and spontaneous decisions. They seem to be more decision-making averse overall, while being more dependent on others to make a choice. Furthermore, they tend to regret their choices. Future decision-aids could be tailored to the characteristics of the identified subgroups, e.g. by not including intuitive components.

15:30 - 17:00

## Understanding usage patterns of mHealth smoking cessation support to improve treatment delivery

T. Jahnel<sup>1</sup>, S. Ferguson<sup>1</sup>

<sup>1</sup>University of Tasmania, Australia

**Background:** mHealth is commonly used to deliver behaviour change content. However, little is known about the mechanisms through which mHealth interventions exert their effects on behaviour change. The aim of this secondary analysis is to examine the usage patterns of text message support during a smoking cessation attempt; examining craving and negative affect prior to, and after, receiving support.

**Methods:** As part of an evaluation of a smoking cessation behaviour change programme, 284 participants were randomised to receive either a paper-based quit smoking booklet (n=142), or to an intervention group which received smoking cessation support via text message (n=142). Text message delivery was time-stamped to allow comparison to other cessation variables of interest. Using an electronic diary, participants monitored their behaviour in near real-time in the 2-weeks leading up to, and 4-weeks following, an assigned quit day. Participants could also request additional text messages in times they felt they were in a situation highly likely to result in a smoking lapse.

**Expected results:** It is expected that a) higher frequency of requested text messages positively predicts craving and b) craving increases gradually leading up to a text message request and c) gradually decreases following a text message during the quit attempt.

**Current stage of work:** Data collection has been completed and analysis is in progress.

**Discussion:** This study may improve our understanding of the usage patterns of content delivered in mHealth interventions in order to systematically improve the content of such interventions and how it is delivered.

15:30 - 17:00

## Teenagers perception of Instagram alcohol related content on health-related quality of life

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<sup>4</sup>School of Marketing, Dublin Institute of Technology, Ireland

Social Networking Sites (SNS) have grown tremendously in the past decade. Concerns regarding their impact on psychological mechanisms (e.g. social comparison, behavioural intention) have been highlighted. However, there is a lack of evidence regarding the influence of SNS content on teenagers' perception of quality of life in relation to alcohol. Thus, our study aims to explore which Instagram profile teenagers associate with a better quality of life: one with or without alcohol references?

During focus groups, French teenagers aged between 11 to 16 years old have been asked to look at two Instagram profiles and answer questions related to each of these profiles using the French multidimensional health-related quality of life questionnaire (VSP-A). The VSP-A is composed of seven dimensions: relationships with friends, with parents, school life, inaction, psychological distress, future, and energy/vitality. The Instagram profiles were constructed using similar pictures in settings and context with two lookalike young women except one profile was showing alcohol, the other was not. Pictures were selected to allow the teenagers to make assumptions about the young women's situation to answer the questionnaire.

The exploratory experiment was commenced in February 2018 and will be completed by April 2018 with a sample of approximatively 30 teenagers.

From this experimentation we expect to gain an insight into how teenagers perceive the impact of alcohol use on quality of life through SNS. These results would allow us to improve our understanding of the importance of SNS within the construct of teenagers' beliefs regarding alcohol related behaviours.

15:30 - 17:00

## A RCT protocol comparing two smoking cessation programs for students: face-to-face intervention vs web-based intervention

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<sup>4</sup>University of Aix-Marseille, France

<sup>5</sup>Gouvernement du Grand-Duché de Luxembourg, Luxembourg

<sup>6</sup>Centre Pierre Janet, University of Lorraine, France

**Background:** Smoking cessation interventions using motivational interviewing (MI) strategies have revealed their effectiveness in adolescent and adult populations. However, delivering face-to-face sessions on a large-scale would involve significant costs. Computer-tailoring (CT) could extend successful the delivery of MI from an individual-level to a population-level. The aim of this randomized control trial is to evaluate the effectiveness of two smoking cessation programs: a face-to-face intervention based on MI principles (FFI) vs a personalized web-based intervention (WBI-p) based on CT, integrated theoretical models (HBM, HAPA,...), and an exploratory work to identify smoking cessation determinants.

**Methods:** Students will be randomly assigned to one of the two experimental groups: 1) FFI (n=100) or 2) WBI-p (n>300). An online self-assessment to evaluate tobacco consumption and psychological variables will be completed before (T0) and after (T1) the 1-month intervention delivery, and at 3 months (T2), 6 months (T3), and one year (T4). Multivariate analysis will be performed (1) to assess group differences in smoking abstinence and (2) to investigate evolution of psychological variables, such as abstinence self-efficacy, at different points in time.

**Current stage of work:** The development of WBI contents are being conducted. **Expected results:** At a population-level, the WBI-p will reveal a similar effectiveness on smoking behavior and psychological variables as the FFI.

**Discussion:** This research project highlights viability and efficiency of a theoretically constructed WBI-p. Moreover, it reveals which type of intervention is most suitable regarding different psychosocial determinants. This will help researchers in the development of evidence-based interventions for this particular population.

15:30 - 17:00

## Required content of a decision-aid to improve cessation support uptake: A study protocol

T. Gültzow<sup>1</sup>, C. Hoving<sup>1</sup>, E. Smit<sup>2</sup>, C. Dirksen<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

<sup>2</sup>University of Amsterdam/ASCoR, Netherlands

**Background:** Using evidence-based smoking cessation support tools can double the chances of quitting, but uptake is low. An online decision aid could help smokers choose the right tool. We aim to reach and quantify expert agreement on the required content of a proposed decision aid with the aim to help smokers in their decision to use smoking cessation support tools.

**Methods:** A three-rounded online Delphi study among experts will be conducted. The first round will consist out of N=10 experts that fill out an open-ended questionnaire on the content of a decision aid. In the second round the list of chosen attributes will be sent to a larger group (N=100) of experts which will be asked to rate these in terms of importance, while additionally asking them for aspects that were previously not identified. In the third round, experts will be asked to re-score their answers if considered appropriate on basis of the data from round two. Data of all rounds will be analysed by employing descriptive techniques.

**Expected results:** We will be able to present expert agreement on the different attributes that should be entailed in the described decision aid.

**Current stage of work:** Data will be collected in the first half of 2018.

**Conclusions:** The study will result in increased knowledge on expert agreement regarding important aspects that should be entailed in an envisioned decision aid for the general Dutch smoking population. Results from this study will be used to inform the development of said decision aid.

# Understanding uptake & usability of e/mHealth interventions

15:30 - 17:00

Ray Tait

15:30 - 17:00

## Reducing cancer-related fatigue in (former) cancer patients using an app: the uptake of the Untire-app.

S. Spahrkäs<sup>1</sup>, A. Looijmans<sup>1</sup>, M. Hagedoorn<sup>1</sup>, R. Sanderman<sup>1,2</sup>

<sup>1</sup>University of Groningen, Netherlands

<sup>2</sup>University of Twente, Netherlands

**Background:** The training in the Untire app is developed to reduce cancer-related fatigue (CRF) and improve quality (QoL) of life in (former) cancer patients.

**Objective:** For this presentation, the primary objective is to evaluate the preliminary uptake of the Untire app (proportions of completed assessments, dropout, registration, downloads) during the first 3 months of the Untire app study (March - May 2018). The secondary objective is to describe sociodemographic characteristics (age, gender, country, level of education) as well as health characteristics (proportion of cancer patients vs. ex-cancer patients, treatment).

**Methods:** The Untire app study is targeted to 6000 (ex-)cancer patients with fatigue across 7 countries via social media (Facebook, Twitter, Lymphoma coalition). Data on sociodemographic characteristics and health characteristics are collected using questionnaires, and user data about the uptake is automatically stored.

**Expected results:** Preliminary results will be presented to give insight in the reach of the Untire App study and the actual uptake of the Untire App. We will also explore which gender and age group makes most use of the app, and what kind of health characteristics are related to patients using the app in the first three months of the study. Descriptive data will be presented.

**Conclusion:** Evaluation of the uptake of the Untire App will provide insights in the reach of mobile phone interventions worldwide as well as the population reached by such an intervention. This will yield valuable information for future mHealth interventions.

15:30 - 17:00

## A review on best practices for digital interventions to improve engagement and adherence in users

M. Karekla<sup>1</sup>, O. Kasinopoulos<sup>1</sup>

<sup>1</sup>University of Cyprus, Cyprus

**Background:** There is a growing need for flexible provision of home-based tailored psychological services. Despite the potential and wide use of digital interventions, concerns remain regarding the engagement of users, as low engagement is associated with low adherence rates, high attrition, and sub-optimal exposure to the intervention. Human-computer interaction and user characteristics are the main identified culprits contributing to these difficulties. To date there have not been any clear and concise recommendations for improved utilization and engagement in digital interventions. The objectives are twofold: to provide an overview of user engagement challenges and propose research informed recommendations for engagement and adherence planning in digital intervention development.

**Methods:** These recommendations were derived from a literature review by two authors and were then conceptualised by expert members of two European Federation of Psychology Associations' (EFPA) committees: Psychology and Health Standing Committee and e-Health Task Force.

**Findings:** Ten recommendation were generated and grouped under four dimensions: 1) A-priori theoretical planning, 2) Human Computer Interaction, 3) Tailoring and targeting to user groups and 4) Active Assessment of usage.

**Discussion:** Following these recommendations is expected to lead in more effective planning for user engagement with the potential to maximize adherence and optimal exposure in treatment. An example of a digital pain management intervention implementing these recommendations will also be discussed.



15:30 - 17:00

## Feasibility and validity of an ecological momentary assessment of coping at home-return after a stroke.

C. Vansimaey<sup>1</sup>, C. Bungener<sup>1</sup>, B. Pitrat<sup>2</sup>, M. Zuber<sup>3</sup>

<sup>1</sup>Laboratory of Psychopathology and Health Processes, Paris Descartes University, Sorbonne Paris Cité, France

<sup>2</sup>Child and Adolescent Psychiatry Department, Robert Debré Hospital, APHP, France

<sup>3</sup>Department of Neurology, Paris Saint Joseph Hospital Group, France

**Background:** Coping strategies partially depend on situational factors and have inter-situation variability. Classical measurement tools are single recall-based auto-questionnaires describing a general coping rather than specific situational coping. Ecological Momentary Assessment (EMA) can reflect the situational dimension of coping by collecting data in real time and environment. Though, very few studies report results based on EMA.

This study aims to examine the feasibility and validity of an EMA of coping. This study is part of a larger project conducted in a population of 68 stroke patients at home-return after having been hospitalized.

**Method:** Thirty-two individuals (92% of contacted patients) completed four brief electronic interviews per day during seven days following home-return (up to 19 days after stroke). The questions about coping used in the EMA was adapted from the Brief-COPE. At the end of the week, participants filled out the classical Brief-COPE questionnaire.

Descriptive analysis were performed to estimate global and daily EMA response rates and to compare the rankings of coping strategies reported at EMA and at the Brief-COPE.

**Results:** The data of 24 participants (75%) met the minimum compliance criterion. They completed 85% (N=569) of programmed interviews. Daily compliance was stable during the week. The EMA and Brief-COPE rankings of coping strategies are mostly similar. Only avoidant strategies (like denial or distraction) have higher ranks when measured by EMA.

**Discussion:** EMA is a feasible and valid method for the assessment of coping. It could be better suited for reflecting the situational dimension of coping than classical questionnaires.

15:30 - 17:00

## Emotional and mental support using entertainment robots for elderly nursing home residents with dementia

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<sup>1</sup>Teikyo University of Science, Japan

<sup>2</sup>Teikyo Junior College, Japan

<sup>3</sup>Tokorozawa Loyal Hospital, Japan

**Background:** As emphasis shifts from biological lifespan to healthy lifespan, a shortage of care workers has become a major issue in nursing homes. Labor-saving for physical work has progressed in a number of nursing homes, but labor-saving for emotional and mental support is still insufficient. Artificial intelligence and information and communication technologies may solve these problems. Here, we introduce entertainment robots into a nursing home.

**Methods and expected results:** Robot-assisted activities are provided in a communal area of a special nursing home for the elderly for an hour every month. The participants in each session are 15 or 16 residents aged 70-95 years (Hasegawa's Dementia Scale-Revised, 0-30, >90% female) selected by a physical therapist. The participants sit in groups of 3 or 4 during the activities. The robots used are commercially available, tabletop sized robots, including a dog robot (AIBO, remote controlled and autonomous modes), a conversational robot (Palro), and an avatar robot (OriHime). Robot use is mediated by several co-medical staff who interpret the situation of the robot. Evaluation is based on changes in daily activities and unified measures such as the Montreal Cognitive Assessment. These activities are expected to lead to improved quality of life.

**Current stage of work:** Although integration of chronological quantitative data is necessary, preliminary results support our expectation, with the residents showing increases in conversation, appetite, and recall.

**Discussion:** Singing and speaking to and from the robot appear more effective for the elderly than robot gestures. Also, the robots' novelty plays a large role.

# Alcohol, physical activity, & obesity

15:30 - 17:00

Bas van den Putte

15:30 - 17:00

## The effects of teacher communication during a health intervention on adolescents' alcohol use.

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**Background:** Alcohol use continues to be a problem during adolescence. One reason might be that school health intervention programs generally have limited effects. An often overlooked factor is the role of teacher communication. Although the importance of teacher communication is well known in the context of learning, no research to date has investigated its role in the context of school-based health interventions.

**Methods:** In a three-wave prospective study of (so far) 47 adolescents, the effects of teacher communication (i.e., clarity, verbal immediacy, and relevance) on attitude, alcohol use intention, binge drink intention, and alcohol use were assessed. These dependent variables were assessed in all three waves. Starting one week after the baseline survey, students participated in a four-lesson intervention program. At the second wave (one week after the last lesson), student perceptions of teacher communication were assessed. Third wave is three months later. Regressions were used to analyze the effects of teacher communication on wave 2 attitude, intention, and alcohol use, controlling for wave 1.

**Results:** Preliminary results of first two waves showed that teaching clarity decreased alcohol use intention ( $\beta = -.29$ ,  $p = .011$ ) and binge drink intention ( $\beta = -.37$ ,  $p < .000$ ). Also, verbal immediacy decreased alcohol use intention ( $\beta = -.30$ ,  $p = .010$ ) and binge drink intention ( $\beta = .31$ ,  $p = .004$ ).

**Current stage of work:** At conference, we present results of three waves, 150 participants.

**Discussion:** Findings support the importance of teacher communication for alcohol use intention and binge drink intention. Therefore, optimizing teacher communication should be taken into account in development of school-based health interventions.

15:30 - 17:00

## The effect of gain-frame message content on intention to drink alcohol

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**Background:** Currently, the only health information mandated on alcohol labels by EU regulation is alcohol by volume (ABV). Public awareness of the Chief Medical Officer's low-risk drinking guidelines is poor, and 10 million people in the UK drink alcohol at levels harmful to health, costing the NHS around £3.5 billion annually. There is a need to improve communication of the low-risk guidelines and potential consequences of alcohol on health.

**Methods:** Informed by message-framing theory, this study was designed to explore how gain-framed messages incorporated into alcohol labelling and glassware design influence people's intentions to consume alcohol. Participants complete an online questionnaire and will be randomly allocated to exposure to one of three gain-frame messages emphasising cancer risk, well-being, or mental health, or a control condition. The impact of the messages on levels of concern about alcohol intake and intention to reduce alcohol consumption will be assessed. 18 questionnaire respondents (6 from each message group) will be interviewed to explore the impact of the message content. Thematic analysis will be applied to interview transcripts.

**Findings:** Work is currently at data collection stage with analysis due to begin in April and to be completed by August 2018.

**Discussion:** The results of this study could help to inform future alcohol-labelling and glassware markings to encourage moderate drinking and reduce alcohol-related harm.

15:30 - 17:00

## Alcohol consumption in Austrian college students – does physical activity matter?

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<sup>2</sup>Innsbruck, Austria

**Introduction:** The age of college students is considered as crucial for developing health behaviors, e.g. a physically active lifestyle. Previous research consistently reported a positive relationship between physical activity (PA) and alcohol consumption. However, the main body of research was done in students from the United States who might differ from European students.

Thus the aim of the present study was to analyze the relationship between PA and alcohol consumption in a sample of Austrian college students.

**Methods:** In a cross-sectional design, 861 Austrian students from various study fields responded to a web-based questionnaire. Self-reported physical activity (International Physical Activity Questionnaire), alcohol consumption and relevant sociodemographic variables were assessed. Multiple regression analyses were used to study the relationship between PA and alcohol consumption.

**Results:** In none of the regression models, a significant relationship between PA and alcohol consumption was found. There was a significant influence of sex, age, marital status, education level, and study fields on alcohol consumption. Male, older, and undergraduate students studying social sciences without a partnership reported higher alcohol consumption.

**Discussion:** The results do not support a general relationship between PA and alcohol consumption among urban Austrian college students of various study fields. Compared to other variables (e.g. sex, marital status), PA seems to be less important in relation to the consumption of alcohol. The present study challenges a global perspective on a positive PA-alcohol consumption relationship and highlights the need for more cross-cultural investigations.

15:30 - 17:00

## Office workers' experiences of an early-phase sitting-reduction intervention (the ReSiT Study): A qualitative analysis

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**Background:** Prolonged sitting time predicts ill-health, putting desk-based office workers at particular risk. This paper describes qualitative findings from a study assessing office workers' responses to a prototype of a theory- and evidence-based intervention designed to displace sitting with standing. The intervention comprises an awareness-raising monitoring and feedback task, provision of a sit-stand workstation, and a 'menu' of behaviour change techniques tailored to self-declared sitting-reduction barriers.

**Methods:** A semi-structured interview design was used. Twenty-nine university office workers were interviewed 1, 6, and 12-weeks post-intervention. Interviews focused on expectations and experiences of standing, workplace-specific constraints, and the usefulness of selected techniques. Thematic analysis identified common reflections.

**Findings:** Three themes captured potential facilitators and barriers to translation of the intervention into behaviour change: practical and social challenges to adherence; reconciling sitting-reduction with mental representations of work; and self-regulatory challenges. While expectations of psychological discomfort from breaking the sitting norm were not borne out by participants' experiences, many encountered unanticipated practical barriers (e.g. insufficient space on the sit-stand workstation). Participants often attempted to stand only for periods of 'worthwhile' duration (e.g. 20 minutes). Some felt unable to stand for cognitively demanding tasks, though others felt better able to complete 'thought work' while standing.

**Discussion:** Findings reveal contextual factors that potentially determine responses to sitting-reduction efforts in the workplace, and speak to the importance of acknowledging contexts in which workers may find standing less appropriate. We describe how these insights have been used to refine the prototype, which is currently undergoing user-testing.

15:30 - 17:00

## Reciprocal associations between physical activity enjoyment, moderate-to-vigorous physical activity and depressive symptoms in non-clinical adults

K. Zarychta<sup>1</sup>, M. Boberska<sup>1</sup>, A. Banik<sup>2</sup>, A. Luszczynska<sup>1,3</sup>, M. Kruk<sup>1</sup>

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<sup>3</sup>Trauma, Health, & Hazards Center, University of Colorado at Colorado Springs, United States

**Background:** Identification of factors which contribute to depressive symptoms and the order in which these factors operate is of key importance in prevention and treatment of depression. Thus, in this study we investigated indirect associations between the constructs from broaden-and-built theory of positive emotions, in particular depressive symptoms, moderate-to-vigorous physical activity (MVPA), and physical activity (PA) enjoyment. It was hypothesized that the association between depressive symptoms (T1) and MVPA (T2) would be mediated by PA enjoyment (T2).

**Methods:** Data were collected twice, with 7-8 month follow-up. Non-clinical group of adults (N = 879 at Time 1 [T1] and N = 603 at Time 2 [T2]) filled in questionnaires measuring depressive symptoms, MVPA, and PA enjoyment.

**Findings:** The results of the mediation analysis showed that the association between depressive symptoms (T1) and MVPA (T2) was mediated by PA enjoyment (T2), after controlling for the baseline mediator, MVPA, age and gender. Lower levels of depressive symptoms (T1) were associated with higher levels of PA enjoyment which in turn predicted MVPA (T2).

**Conclusions:** These results indicate that depression symptoms are likely to decrease PA enjoyment and thus hinder MVPA. Future research need to identify prompts for PA enjoyment among people with depressive symptoms.

**Keywords:** depressive symptoms; enjoyment; moderate-to-vigorous physical activity; adults; non-clinical sample



# Health & wellbeing issues associated with romantic relationships & parenting roles

15:30 - 17:00

Jonathan Egan

15:30 - 17:00

## Health Behaviors Influence Selection of Romantic Partners

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<sup>1</sup>Marshall University, United States

**Background:** Romantic partners influence the health behaviours of individuals such that partners' health behaviours grow more similar over time. However, research has focused on existing couples, and has not yet considered whether assortative mating may influence health behaviour through initial selection of a partner with similar health behaviours. This series of two studies tests the hypothesis that individuals are more interested in partners with similar health behaviours.

**Methods:** These studies involved completion of online anonymous surveys by female participants (n=148 and n=137). Each study included a measure of personal health behaviours followed by a vignette. In study 1, the vignette was modified to include a potential partner with high or low levels of physical activity, and in study 2, the potential partner either smoked or did not smoke.

**Findings:** Results of study 1 suggest that physically active individuals were considered healthier and more physically attractive, but only non-significant trends support matching of personal health behaviors. In study 2, non-smokers rated themselves as more interested in a relationship with a non-smoker than a smoker, whereas ratings were similar between the two vignettes for individuals who themselves smoked ( $F = 4.81, p = .003$ ).

**Discussion:** While differences emerged between the studies, results of this initial examination of assortative mating of individuals with similar health behaviours suggests that matching of partners may occur. Further research is needed to determine the extent to which this matching occurs and how it may influence, and possibly limit, health behavior change in romantic relationships.

15:30 - 17:00

## The effect of alexithymia on relationship functioning is mediated by affectionate experience

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<sup>2</sup>FernUniversität in Hagen, Germany

**Background:** Alexithymia, a personality trait characterized by difficulties with identifying and verbalizing emotions, is proven to be associated with less satisfaction in intimate relationships. Affectionate experience on the other hand has turned out to mediate the effect of alexithymia on specific relationship variables (e.g. attachment behaviour). Therefore, the present study aimed at examining the potential mediating role of affectionate experience for the effect of alexithymia on relationship satisfaction and of alexithymia on sexual satisfaction.

**Methods:** Two hundred forty-two individuals in heterosexual relationships (191 females, mean age 30.7 years) filled out questionnaires about alexithymia (Toronto alexithymia scale, TAS-20), the trait affection scale (TAS-G/-R), the relationship assessment scale (ZIP), and the relationship quality questionnaire (FPQ). Two independent statistical models assessed, if affectionate experience mediates the relation between alexithymia and a) relationship satisfaction and b) sexual satisfaction. The proposed mediation models were performed using the PROCESS tool.

**Findings:** Affectionate experience mediates the effect of alexithymia on relationship satisfaction (indirect effect:  $b = -.012$ , 95% CI  $[-.022, -.005]$ ) and sexual satisfaction (indirect effect:  $b = -.015$ , 95% CI  $[-.024, -.007]$ ). Both models are significant ( $p < .001$ ) and explain 14% (relationship satisfaction) and 11% (sexual satisfaction) of the variance.

**Discussion:** Affectionate experience mediates the negative effect of alexithymia on relationship and sexual satisfaction. As individuals with higher levels of alexithymia have an impaired interpersonal functioning, strengthening the ability to give and receive affectionate experiences may help to improve their intimate relationship functioning on different levels and thus, have a positive impact on their health.

15:30 - 17:00

## Food consumption habits in Romanian families and adolescents - a pilot study

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<sup>2</sup>Laboratory of Cognitive Clinical Sciences, Romania

Food habits have changed in Romania and in the rest of the world, in the last decades. These changes regard both the quantity and the quality of the food ingested, and have a big impact on the quality of life and health. Many studies report an increase in the incidents of cancer, for example, connected to the life style, and especially nutrition.

In this study, I investigated the food consumption habits in a number of N=282 Romanian families, with or without children (out of which N=191 were adolescents).

Two questionnaires were used - one for food habits in adolescents, and one for family regular food consumption, plus an index of regular food consumption per classes of food, completed by the adult responsible of food purchase and cooking in the family.

The results show a significant change in food habits of Romanians, compared to results found by Petrovici and Ritson (2000), both at the family level, and in adolescent level. The level of meat consumption increased, whereas the vegetables and fruit consumption decreased in adolescents, even more compared to the rest of the family. This results forecast further changes in food habits for the following years, and raises the need of a more dedicated policy regarding food habits, with direct implication on health and quality of life.

15:30 - 17:00

## Alcohol related knowledge and drinking behaviour: survey for pregnant women and mothers in Japan

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<sup>4</sup>Kanagawa prefectural Ashigarakami hospital, Japan

**Background:** Parental behaviour for alcohol and family environment has been indicated the one reason of children's alcohol misuse and future alcoholism. Some Japanese research also showed that 34.9% of children in aged 10-11 reported they had been already experienced drinking alcohol, and some children also reported that they had drunk alcohol before 6 years old, however, the parental affection in this generation had been not shown. In this research, we investigated drinking behaviour of expected mothers and mothers of infants, as basic data for alcohol prevention of children.

**Methods:** 200 questionnaires were distributed for women who are expected mother or mothers of infant. The questionnaire was consisted three parts; new Kurihama Alcoholism Screening Test (new KAST), questions about alcohol related knowledge for health, and questions about alcohol related experience of their own.

**Findings:** Valid response was 116 (valid collection rate: 58.0%). 10(8.6%), 9(9.0%) mothers were classified as "caution needed to alcoholism", "suspicious alcoholism" respectively from new KAST. 104(89.7%) knew the cause of acute alcoholism, only 30(25.9%) knew alcohol can cause inflammation of the pancreas. Furthermore, 26(22.4%) answered that they had offered alcohol from their parent(s) when they were child.

**Discussion:** The results shows the existence mothers with alcohol related problem, and also the shortage of alcohol related problem might be passing from parents to parents in next generation. This suggested that education about alcohol should be effective not only for today's health of children but also for the prevention of alcohol misuse of children.

15:30 - 17:00

## The Experience of Teenage Pregnancy and its Effect on the Couples' Relationship: A Retrospective Study

C. Azzopardi<sup>1</sup>, R. Farrugia Debono<sup>1</sup>

<sup>1</sup>University of Malta, Malta

Research often explores teenage pregnancy from separate entities; the grandparents, the father or the mother, and rarely is the couple relationship considered. This gap is more evident in Malta, a small island with close knit communities. Thus, this paper is aimed to explore the experience of unplanned teenage pregnancy. Semi structured interviews were conducted with four Maltese couples. Thematic analysis was used to analyse the data. The average age of participants interviewed was 22, whilst the average age at time of pregnancy was 17. Five superordinate themes were extrapolated from the participants narratives: Family Acceptance, The Birth Experience, Child Rearing, Perceived changes to the couple relationship and Reactions to change in lifestyle. This qualitative study provides an account of the changes young couples face in their relationship when an unplanned pregnancy occurs. Results indicate that although the lives of these couples had changed dramatically, with support from each other they strived to guard and maintain their relationship and helped them become more resilient and committed to one another. In addition, familial and social support were deemed as highly important and crucial during several moments during the pregnancy and upbringing. Other strong elements highlighted by the couples during this research were the hardships with regards to dedicating time for their relationship, including limited sexual contact and lack of communication due to restraints from privacy. Recommendations for future research in this area are also given.

15:30 - 17:00

## Post-Traumatic Stress disorder after childbirth: Prospective study of risk factors on French and Tunisian populations.

H. Nawel<sup>1</sup>, E. Spitz<sup>1</sup>

<sup>1</sup>Lorraine University, France

**Background:** Several researches have been conducted on Post Traumatic Stress Disorder (PTSD) following childbirth but no study has been conducted according to the new diagnostic criteria of DSM V. The aim of this study is to evaluate the prevalence of PTSD in French and Tunisian women and to determine a predictive model of PTSD for each population.

**Methods:** This study was conducted in the third trimester of pregnancy and at two months after childbirth. The sample is composed of 646 French and Tunisian women. The questionnaires used consisted of scales assessing PTSD specific to childbirth, pre and postnatal coping strategies, and perceived support from maternity team care.

**Findings:** PTSD symptoms following childbirth was found in 16.3% of French women and 36.2% of Tunisian women. Hierarchical regressions analyses showed that for French women, primiparity and mode of delivery ( $\beta = .24^{**}$ ), blame used during prenatal period ( $\beta = .22^{**}$ ), and lack of support from maternity team care during childbirth ( $\beta = -.19^{**}$ ) are risk factors for development of postpartum PTSD. For Tunisian women, primiparity and mode of delivery ( $\beta = .50^{**}$ ), lack of support from maternity team care ( $\beta = -.37^{**}$ ), dramatization ( $\beta = .41^{**}$ ) and blame ( $\beta = .24^{**}$ ) used after childbirth are risk factors for development of postpartum PTSD.

**Conclusion:** Some risk factors associated with postpartum PTSD are common to both populations but coping strategies differs according to the studied population. This difference can be largely explained by cultural differences.

# Paediatric chronic illness & disability

15:30 - 17:00

Katelynn Boerner



15:30 - 17:00

## Child with epilepsy in regular school: sociometric status and teacher support

D. Brabcova<sup>1</sup>, J. Kohout<sup>1</sup>, Z. Vychodska<sup>1</sup>

<sup>1</sup>University of West Bohemia, Czech Republic

It is known that status of children with epilepsy (CWE) in schools is difficult because of stigma related to this disease. We aimed to evaluate sociometric status of CWE attending regular Czech primary schools and the effect of different variables on this status. In total, 91 CWE aged 8-15 years and 1594 their classmates participated in the study. They fulfilled Long-Jones sociometric test and a questionnaire focusing on relations in the class and perceived support from teacher. The proportion of CWE rejected by their peers was higher than among other children (20 % compared with 11 %;  $p=0.007$ ) and only 3 % were preferred ("stars") compared with 11 % in the general population ( $p=0.019$ ). In the group of CWE diagnosed with a specific learning disability and/or ADHD ( $n=32$ ), the proportion of rejected individuals was even 38 % compared with only 10 % among other CWE ( $p=0.002$ ). The lower status of CWE was correlated with lower level of perceived teacher support ( $r = -0.29$ ;  $p=0.005$ ) and worse relations in class ( $r = -0.58$ ;  $p < 0.001$ ) reported by these children. Higher sociometric status ( $p=0.013$ ) of CWE was found in the classes where pupils knew about the epilepsy of their classmate. Our study suggests that especially CWE with learning difficulties and/or ADHD tend to be significantly rejected by their peers in regular schools. It is to believe that these children are at greater risk of being bullied and thus special attention should be devoted to them.

15:30 - 17:00

## Parental health literacy and numeracy as it relates to youth asthma symptom control

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<sup>3</sup>School of Public Health, West Virginia University, United States

Low health literacy is associated with lower regimen adherence, poorer symptom control, lower quality of life, and less knowledge about self-management in adults with asthma. However, research is limited in understanding the relation between parental health literacy and numeracy and child asthma symptom control. This study aims to assess this in a rural U.S. population.

As a part of an ongoing pilot trial, 29 youth with asthma (ages 9-17; Mage = 12. 29; 25% males) were recruited. Youth under 12 years completed the Asthma Control Test (ACT) with their parents, while older children completed it independently. Parents (Mage = 40. 33 years; 83% mothers) completed the Short Test of Functional Health Literacy in Adults (s-TOFLA) and the Asthma Numeracy Questionnaire (ANQ). Pearson's correlations were conducted to determine associations between variables, and additional analyses are planned once data collection is completed in June 2018 (target n = 50).

The correlation matrix completed for all three variables (i. e. S-TOFLA, ANQ and ACT) reveal a moderate correlation between the s-TOFLA and the Asthma Control Test ( $r=.32$ ) and the ANQ and the Asthma Control Test for children under 11 ( $r=.21$ ) and the Asthma Control Test for children over 12 ( $r=.42$ ). There was a large association between health literacy (s-TOFLA) and health numeracy (ANQ),  $r=.68$ .

Preliminary results suggest an association between parental health literacy and numeracy with children's asthma symptom control. Future studies should explore the impact of low health literacy and numeracy on asthma self-management among youth and parents, and design effective interventions.

15:30 - 17:00

## Quality of life and coping strategies among siblings of children living with cystic fibrosis

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**Background:** The impact of the cystic fibrosis on siblings of children living with said disease has been widely studied in recent years. The characteristics of this disease (severity, chronic nature, invasive care) are the reason why it impacts on the sibling's life on several levels.

One of the issue is that the family is focused mainly on the sick child because they have special needs, risking to neglect the needs of the other family members.

**Methods:** We conducted a systematic review about the impact of the chronic disease (included cystic fibrosis) of a child on the siblings, in terms of quality of life and coping strategies.

**Findings:** There is a consensus among these studies for the collected psychological data : (1) internalization attitudes (withdrawn children) are quoted and related to emotions such as sadness and unexpressed anger ; (2) externalizing attitudes (aggressivity, delinquency or violent behaviours) are often linked with emotions such as anger, impossibility to feel relaxed and experiencing feelings of injustice related to the erratic attention given by the parents ; (3) miscommunication among the family is frequently quoted : notably the inadequacy of interactions between family members which can cause for the siblings some psychopathological disorders, such as anxio-depressive symptoms.

**Discussion:** Our perspective is (a) to inform and raise awareness of the medical staff about therapeutic support activities for brothers and sisters of children living with cystic fibrosis, (b) to create and assess a psychological program to help them

15:30 - 17:00

## An Adaptation of the Beliefs about Medicine Questionnaire for Young People With Asthma (BMQ-YPWA)

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<sup>4</sup>The Royal Brompton & Harefield NHS Hospital Trust, United Kingdom

**Background:** Currently clinicians find it difficult to identify patients who are nonadherent and to tailor interventions to address this. The Beliefs about Medicine Questionnaire (BMQ) has not been validated in young people with problematic asthma (PA) and does not elicit practical barriers as per the Perceptions and Practicalities Approach. Following qualitative work at a paediatric tertiary care clinic in London the BMQ has been adapted. The aim of this study is to validate the adapted BMQ for Young People With Asthma (BMQ-YPWA).

**Methods:** One hundred patients aged 12-17 years old will be recruited who have had an electronic monitoring device (EMD) fitted to their preventer inhaler. Patients will complete the BMQ-YPWA and a visual analogue scale (VAS) for adherence. Their BMQ-YPWA responses will then be analysed to see if the score correlates with the EMD adherence levels. Internal validity will be evaluated for the items of the new BMQ-YPWA.

**Expected results:** It is expected that the BMQ-YPWA, the VAS and the EMD adherence data will be highly correlated, and that the adapted BMQ will have strong internal validity.

**Current stage of work:** This project is going through NHS ethics approvals as an amendment to the existing qualitative study, which was used for the BMQ adaptation. Recruitment will be from March until May 2018.

**Discussion:** We aim to show that the BMQ-YPWA can be used by clinicians and researchers to quickly identify nonadherent behaviours and beliefs, and hence used to target interventions to improve adherence and reduce preventable child asthma deaths.

15:30 - 17:00

## “In the wild”: Conducting paediatric pain research outside of traditional clinical settings

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**Background/aims:** Paediatric research primarily focuses on clinically-presented pains, such as post-operative or procedural pains. Children frequently experience ‘everyday’ pains at home with their parents. Natural settings provide significant opportunities to understand how children manage pain. Non-clinic-based research is difficult: less control over events; lack of suitable methodologies; etc.

Home-based observation methodologies were compared, to assess the feasibility of research in non-clinical environments.

**Methods:** Children (N=13) were video-recorded during three hours at home, to capture at least one pain event. Pain events were rated by child and parent using pain-face scales. Parent distress was reported on numeric rating scales. Researchers completed pain scales (either present or watching recordings). Video-recordings were also scored for protective/distressing or coping-promoting behaviour.

**What went wrong?**

1. Researcher presence affected behaviour: pain events less likely; lower pain estimates by children ( $p=.03$ ); child distress was higher ( $p=.006$ ); parents conscious of cameras; researchers rated pain more highly in person than watching recordings ( $p=.04$ )
2. Lack of data: several children experienced zero pain events
3. Equipment difficulties: too few video-cameras, battery issues, etc.

**Possible solutions:**

1. No researcher being present may reduce feelings of intrusion, and result in more natural behaviours (and more pain events); may increase participation.
2. Additional cameras to capture behaviour
3. Compare home with day-care: increased pain events, but richer context of events

**Conclusions:** ‘Everyday’ pains offer valuable opportunities to observe how children manage pain. Home-observation can feasibly assess parent-child interactions during painful events and can provide a deeper understanding of pain experiences beyond clinical environments.

# Lifestyle behaviour change

15:30 - 17:00

Rachel Carey

15:30 - 17:00

## A systematic review of breastfeeding interventions among postpartum women using the Behaviour Change Techniques taxonomy

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<sup>6</sup>Temple University, United States

**Background:** Breastfeeding is associated with a multitude of health benefits for both infants and mothers like reduced risk of hypertension, cardiovascular disease, and type-2 diabetes for the mother and protection against overweight, obesity, and type-2 diabetes for the infant's later life. On the other hand, most mothers are not meeting the recommendation of exclusive breastfeeding for six months. The aim of this study is to systematically review the evidence of interventions aiming to promote breastfeeding among postpartum women and identify the pattern of behaviour change techniques (BCT) in effective interventions.

**Methods:** The PRISMA guidelines were followed throughout the review process. Peer-reviewed studies including interventions were examined by searching electronic databases (PsycINFO, EMBASE and Medline). Narrative analysis is used to identify patterns within the records and a checklist to assess the studies' quality. Finally, the BCT taxonomy is used to extract intervention components.

**Expected Results:** This review will identify BCTs used in breastfeeding interventions for postpartum women and highlight, which BCTs can be selected by future intervention developers as more effective.

**Current stage of work:** A total of 2325 records were identified using the search strategy and following all stages of screening, 27 records were reviewed. Currently the included studies' quality is assessed and BCTs extracted by three independent reviewers.

**Discussion:** The review will inform a theory-based intervention using new technologies to promote a healthy lifestyle for women postpartum including sustained breastfeeding. It is one of the few reviews using the BCT taxonomy to identify effective intervention components.

15:30 - 17:00

## Improving breastfeeding in Scotland: co-production of a breast pump service

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<sup>3</sup>Edinburgh Napier University, United Kingdom

**Background:** Exclusive breastfeeding is recommended for the first six months of baby's life however, many mothers indicate that this target is unrealistic. Hence, the use of breast pumps is increasing and could facilitate increased breastmilk provision, although research indicates that there is conflicting advice, dissatisfaction with support and variation in breast pump access which contribute to health inequalities. This study applies a co-production process to develop a breast pump service to promote breastfeeding

**Methods:** Three groups 1) recent mothers, 2) maternity and early year health professionals and 3) maternity voluntary workers completed an online survey to inform intervention design, and identify the most important theoretical components to be addressed in a subsequent intervention. Questions assessed the key sources of behaviour (related to using or supplying a breast pump) identified from the COM-B model. Data were collated and compared between groups using descriptive statistics.

**Main outcomes:** 648 mothers and 147 health professionals/volunteers completed the survey. All groups' scored the three main COM-B sources of behaviour highly. The highest scoring COM-B sources of behaviour in mothers were physical capability, psychological capability and reflective motivation and in health professionals/volunteers were physical capability, physical opportunity and social opportunity. These findings will be used in further behavioural diagnosis for intervention development.

**Discussion:** For a future new breast pump service to be feasible, parents will require more information and support whereas health professionals will require resource to provide support and the service. The co-production approach has provided invaluable insight for intervention development.



15:30 - 17:00

## Using Implementation Intentions to Improve Adolescent Anger Management: A Research Protocol

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We aim to test whether anger management in adolescents can be improved using implementation intentions. This technique involves identifying critical situations that might trigger the unwanted behaviour and making plans to engage in alternative actions when those triggers are present.

A randomised controlled trial will be conducted. Two-hundred students from 11 to 17 years old attending special schools for children with behavioural problems will be randomised to three conditions: control, specific triggers and general trigger. A list of triggers and solutions will be provided in the form of a Volitional Help Sheet and participants in the experimental condition will link one trigger with one solution at a time in order to make plans. Participants in the specific-triggers condition will receive a list of ten specific situations that may trigger anger. Participants in the general-trigger condition will receive only one general trigger: "If I am getting angry...". Measures of anger management, aggression, impulsivity, violent intentions and callous-unemotional traits will be collected at baseline, one month and six months after intervention. Data will be analysed using Multivariate Analysis of Covariance.

Both intervention groups are expected to improve anger management and reduce reactive aggression in comparison to both control groups. Currently, a pilot study is being conducted to detect relevant anger triggers and anger management strategies for this population.

If a VHS is effective in improving anger management and reducing aggression in adolescents, it can have great implications for reducing antisocial behaviour in youth in a cost-effective manner.

15:30 - 17:00

## Implementation intention on vaccination behavior against fluenza with healthcare workers.

A. Gauchet<sup>1</sup>, C. Bodelet<sup>1</sup>

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**Background:** The vaccination rate against influenza among healthcare workers working in institutions reaches only 21% in France. However, they represent a population that contributes to the spread of infection among people at risk leading to complications followed by death. We propose to test the effect of implementation intentions on influenza vaccination behavior.

**Method:** Healthcare workers (N = 988) from Grenoble, Annecy, Chambéry and Nîmes were allocated to an experimental group or a control group. Healthcare workers in both groups answered a self-report measuring their motivations and knowledge about the influenza vaccine. However, only the health caregivers of the experimental condition were formed to the implementation intention of the type "If I encounter the situation X, then I will do Y". They also chose, from a list, situations constituting obstacles to the realization of the behavior and for each of them they chose a solution, among two proposed. A second questionnaire was sent to them one month later to measure their vaccination behavior.

**Expected results:** We expect that the participants in the experimental group will have significantly higher vaccination rate compared to the control group. **Current stage of work:** We are sending the second questionnaire to healthcare workers.

**Discussion:** Results showing the effectiveness of implementation intention could be a way to increase the vaccination rate of healthcare workers in institutions.

15:30 - 17:00

## Reducing high-calorie snack consumption: increasing implementation intention effectiveness for those low in eating self-efficacy

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<sup>2</sup>University of Sussex, United Kingdom

<sup>3</sup>Kingston University, United Kingdom

**Background:** Autonomy supportive implementation intention exercises have been shown to facilitate goal directed behaviour (Koestner et al., 2006). The reported research explored whether eating self-efficacy moderated the impact of autonomy-supportive versus controlling implementation intention prompts to reduce high-calorie snack intake.

**Methods:** The study employed a randomized prospective design, involving two waves of data collection. At Time 1, participants (N = 300) completed an online questionnaire which asked them to report demographic variables and their snacking behaviour over the previous 7 days. Participants were subsequently asked to form either an autonomy-supportive implementation intention ("If I think I am going to eat a high-calorie snack, then I will choose to ignore that temptation") or a controlling implementation intention ("If I think I am going to eat a high-calorie snack, then I must ignore that temptation"). Participants reported their consumption of high-calorie snacks and completed a measure of eating self-efficacy 7 days later.

**Findings:** Eating self-efficacy moderated the effects of implementation intention framing. Autonomy-supportive implementation intentions had a greater impact on the avoidance of snacking for high eating self-efficacy participants than did controlling implementation intentions. In contrast, for low eating self-efficacy participants, controlling implementation intentions were more impactful than were autonomy-supportive implementation intentions.

**Discussion:** The results suggest that if implementation intentions to promote healthy diet are to be effective, the impact of eating-self-efficacy should be considered, and the design of interventions adapted accordingly.

15:30 - 17:00

## Associations between sedentary behaviors and self-efficacy: a systematic review

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<sup>2</sup>University of Social Sciences and Humanities, Poland

<sup>3</sup>University of Colorado at Colorado Springs, United States

**Background:** The study aimed at providing a quantitative synthesis of existing empirical evidence concerning psychosocial determinants or correlates of sedentary behaviors (SB). More specifically, it contributes to a better understanding of relations between sedentary behaviors and self-efficacy (SE).

**Methods:** Data were collected in accordance to PRISMA guidelines for the reporting of systematic reviews and meta-analyses and registered with PROSPERO database. A systematic search included the following 6 databases: PsycINFO, PsychArticle, Academic Search Complete, Health Source: Nursing/Academic Edition, MEDLINE and Scopus. Studies which provided information about the associations between SB and self-efficacy were included into analyses (n = 34).

**Findings:** Fifty-one out of 69 (74%) association coefficients demonstrated significant relationships between sedentary behaviors and self-efficacy. Respectively, 47 out of 51 (92%) coefficients showed that higher levels of self-efficacy were related to lower levels of sedentary behaviors. The remaining four coefficients yielded the opposite pattern of associations. Significant negative associations between SB and SE differed, depending on the type of SE. In particular, significant associations between SB-related self-efficacy and SB were found in 28 out of 35 (80%) analyzed relationships. In case of PA self-efficacy and SB, significant associations were found in only 11 out of 25 (44%) identified relationships.

**Discussion:** The majority of studies showed that SB self-efficacy is associated with lower SB, whereas physical activity SE may be unrelated to SB. As majority of the studies were conducted using a cross-sectional design, any conclusions about the possible associations should be treated with caution.

# Risk perception & preventive behaviours

15:30 - 17:00

Robbert Sanderman

15:30 - 17:00

## Korean mothers' health beliefs of cervical cancer prevention and daughters' vaccination against Human papilloma virus

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**Introduction:** Mothers' opinion or decision about daughters' vaccination is critical so far. This study explored whether mothers' health beliefs of cervical cancer prevention (including the Pap test) could relate the status or level of HPV vaccination for their daughters.

**Methods:** This study was a descriptive cross sectional survey design. Mothers' health beliefs consisted of 28 items, 6 subscales (seriousness, barrier, cue to action, awareness of the Pap test, benefit of the Pap, necessity of the Pap). Levels of vaccination was classified into 4 groups (already vaccinated, will to be vaccinated, will not to be vaccinated, don't know). Descriptive statistics and ANOVA were used to analyzed the data.

**Results:** The participants comprised 1581 mothers having adolescent daughters living in Korea. Among mothers' health beliefs, seriousness ( $F=8.49$ ,  $p<.001$ ), cue to action ( $F=2.83$ ,  $p=.037$ ), awareness of the Pap ( $F=6.44$ ,  $p<.001$ ), benefit of the Pap ( $F=30.22$ ,  $p<.001$ ) and necessity of the Pap ( $F=12.56$ ,  $p<.001$ ) were different by the levels of daughters' vaccination. In the group of mothers having vaccinated daughters was the highest scores of the awareness and necessity of the Pap test.

**Conclusion:** Mothers' health belief of cervical cancer prevention could influence on their daughters' cervical cancer prevention in terms of HPV vaccination. For the strategy to enhance HPV vaccination of adolescent daughters, it is helpful to educate adolescents mothers based on health beliefs model.

**Acknowledgement:** This study was supported by the National Research Foundation of Korea(NRF) grant funded by the Korea government (Grant No. 2015-R1-A1-A3A0-4001267, 2018R1A2B2001231)

15:30 - 17:00

## Vaccination decisions: what could be added to Health Belief Model?

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**Background:** Vaccination hesitancy continues to be an important public health problem. The factors people base their vaccination decisions on might be effectively used in interventions promoting vaccination. Health Belief model (HBM) is one of the most respected theories regarding health-related decisions, including vaccination. This research focuses on HBM's applicability to vaccination decisions and other cognitive constructs which might influence the decision.

**Methods:** Using an internet survey, parents of underage children living in St. Petersburg (Russia) (N = 266) were asked to make a decision about vaccination of their child based on a fictitious scenario and describe the reason for their decision. The reasons provided were thematically coded.

**Findings:** Majority of provided reasons for vaccination decisions corresponds with the main HBM constructs: perceived threat (22.2%), barriers (16.1%), benefits (16.1%) and their ratio (6.1%). Other categories were general positive/negative attitudes towards vaccination (10.0%) and external reference for the information provided or decision made (8.9%). Positive decisions were more often based on risk/benefit analysis ( $p \leq 0.001$ ) while negative - on general attitudes towards vaccination ( $p \leq 0.05$ ). In rare cases, participants based their estimations on potential risks and benefits not their child but for other peoples/society, demonstrating pro-social motivation. Pro-social motivation has been found only among people who agreed on vaccination.

**Discussion:** Apart from the decisions made on the analysis of disease threat and vaccination risks and benefits, other types of decision logic include one based on general attitudes towards vaccination and search for external approval for the decision from organizations (e.g. WHO) or significant others.

15:30 - 17:00

## How to predict participation in colorectal cancer screening? The contribution of Theory of Planned Behaviour

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**Background:** Detected early, colorectal cancer can be cured in nine cases out of ten, but it remains the second leading cause of cancer mortality in France. However, current participations in organized screening continue to be low and must be improved. Based on the Theory of Planned Behaviour (TPB, Ajzen, 1994), this study aims to identify the psychosocial determinants of participation in organized screening for colorectal cancer.

**Methods:** Two qualitative studies were previously conducted with GPs and patients to develop a questionnaire measuring salient beliefs related to attitudes, subjective norms and perceived behavioural control toward colorectal cancer screening (Ajzen, 2006). Participants in the present study came from the general population (men and women aged between 50 and 74) and were recruited through a screening structure. Ultimately, 160 questionnaires were collected. All TPB determinants were measured at baseline, screening behaviour was evaluated 4 months later. A path analysis with a Bayesian estimator was applied to examine the hypothesized model.

**Findings:** Analysis revealed that model fit was acceptable (predictive p-value = .54). The model explained 35% of intentions and 6 % of screening behaviour. Both subjective norms ( $\beta = .26$ , 95% CI [.10, .40]) and perceived behavioural control ( $\beta = .38$ , 95% CI [.20, .54]) were related to intentions. Only perceived behavioural control was significantly related to screening behaviour ( $\beta=.21$ , 95% CI [.01, .40]).

**Discussion:** This study highlighted the importance of perceived behavioural control in colorectal cancer screening participation. Future researches focusing on intention-behaviour gap would be necessary.



# Physical activity & health promoting behaviours

15:30 - 17:00

Lena Fleig

15:30 - 17:00

## Experimental investigation of decision-making processes in daily physically active behaviors using a virtual reality set-up

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**Background:** Energy expenditure provided by physical activity (PA) can be significantly increased by daily behaviors (stair use, walking). However, factors from the environment, and motivational and volitional processes, tend to impact the decisions when an active solution (stairs) is available at the same time as an inactive solution (elevator). The aim of this study is to identify the decision-making processes implicated in daily PA when time and effort to reach an objective (e.g., a meeting) vary.

**Methods:** 150 healthy adults will be randomized to one of three experiments after filling out questionnaires measuring habits regarding PA, motivational, and volitional factors of PA adoption. Experiment 1 is a first-person 3D interactive movie where 3 actors are waiting at the point-of-decision, where peers' behaviors and availability of the inactive solution vary. Experiment 2 is a virtual replication of a business school, where previous knowledge of the building and disposition of the stairs (hidden/visible) vary. Experiment 3 is a virtual modified version of the business school where a stairwell and an escalator provide access to the first floor, using implicit (steps on the floor) and explicit (motivational messages) as point-of-decision prompts.

**Expected results:** Results will be analyzed in line with the integrated behavior change model (Hagger & Chatzisarantis, 2014) and the naturalistic decision-making theory (Klein, 2015).

**Current stage of work:** Participants will be contacted for experimentations from February to June 2018.

**Discussion:** Real time decision-making processes will be linked to processes of change regarding PA, allowing for recommendations for future interventional designs.

15:30 - 17:00

## Maternal guidance: The importance of psycho-social variables to predict children`s media consumption and physical activity

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<sup>2</sup>University of Social Sciences and Humanities, Poland

As children have limited capacities for self-regulating their health behaviours, parental guidance may aid behavioural regulation. However, research on complex parental predictors of child behaviours is limited. This study examined the role of maternal psycho-social predictors derived from a health-behaviour change theory, the Health Action Process Approach (HAPA), on children's physical activity (PA) and media consumption (MC). Mother-child dyads (N=105) were enrolled into an observational study with two time points three weeks apart. Mothers (Mage = 43.83, SD= 4.45) completed questionnaires measuring their children's (Mage= 12.10, SD= 0.99) MC and PA plus key constructs of the HAPA. Mother`s positive outcome expectancies (T1) for less MC were positively related with their intention to reduce their child's MC (T1). Regarding PA, only maternal risk perception (T1) was positively associated with mother`s intention to monitor their child's PA (T1). Moreover, mothers' intention (T1) was positively related to planning MC and planning PA (T2). Neither intention (T1) nor planning (T2) predicted MC or PA (T2). The findings demonstrate that only some, but not all of the motivational HAPA predictors reported by mothers explained maternal intention to monitor children's MC and PA. Contrary to hypotheses derived from the HAPA, maternal volitional predictors were unrelated to children's behaviour.

Future research should account for stages of behaviour change to identify stage-specific predictors of intention to monitor MC and PA and the behaviour itself. Possible moderators (for instance normative support or the child's sex) should be examined.

15:30 - 17:00

## How cognizance influence the motivation to change regarding both sedentary behaviour and physical activity.

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<sup>1</sup>CAPHRI, Maastricht University, Netherlands

<sup>2</sup>Maastricht University, Netherlands

**Background:** Prolonged sitting and insufficient physical activity have shown to have fatal health consequences. To change unhealthy behaviour people need to be cognisant of their current behaviour. However, people are often lacking awareness about their behaviour. We hypothesize that four different types of cognizance exist (1) people that are aware that they act healthy, (2) people that are aware that they act unhealthy, (3) people that are unaware that they act healthy, and (4) people that are unaware that they act unhealthy. Depending on which group a person belongs to we assume different levels of motivation to change and effects on behaviour.

**Methods:** A quantitative longitudinal study, consisting of a baseline measure and one follow-up will be conducted among approx. 350 participants. Participants will be asked to wear an activity monitor (MOX) for a week and subsequently fill in a questionnaire. ANOVA and regression analyses will be used to investigate the effect of the level of cognizance on motivation and behaviour.

**Expected results:** We expect that a person's motivation to change an unhealthy behavior depends on the level cognizance. Furthermore, we expect that the effect of cognizance on behavior is mediated by motivation.

**Current stage of work:** The questionnaire is currently prepared. The first data collection will be in March 2017.

**Discussion:** Understanding the effect of one's own awareness regarding both motivation and behaviour can give us insight into the processes of behaviour change. Furthermore, the results can improve interventions by targeting people's awareness before targeting their motivation.

15:30 - 17:00

## The mechanisms by which high treatability information negatively influences intention to prevent skin cancer

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<sup>1</sup>University of Groningen, Netherlands

**Background:** The information that indicates cancer is well treatable is called 'high treatability information' (HTI), and when cancer is not well treatable, the information is called 'low treatability information' (LTI). Under high threat conditions, HTI may reduce intention to prevent cancer. However, little is known about the mechanisms by which HTI reduce intention to prevent cancer. We conducted this study to rule out the possibility that the negative effects of HTI on intention is caused by a defensive process.

**Methods:** A 3(control versus LTI versus HTI) × 2(self-affirmation versus no self-affirmation)-experiment was conducted. Participants (N = 342) were recruited from the general Dutch population, and they were randomly assigned to one of the six conditions. There were two main outcome measures: beliefs about the link between sunshine and skin cancer and intention to prevent skin cancer.

**Findings:** Results revealed that after self-affirmation, an inclination of increase in beliefs and intention was found in LTI group, and an inclination of decrease in beliefs and intention was found in HTI group. The contrasts indicated that after self-affirmation, LTI group showed significantly higher beliefs and intention than HTI group ( $p = .04$ ).

**Discussion:** The findings in LTI groups suggested that the effects of LTI can be interpreted by a defensive process. However, the findings in HTI groups suggested that when people were not self-affirmed, the negative effects of HTI cannot be interpreted by a defensive process; when people were self-affirmed, the negative effects of HTI may be interpreted by an overload of threat.

15:30 - 17:00

## Exploring a laypersons understanding of health-habit formation: a network diagram approach

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<sup>2</sup>Curtin University, Australia

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**Background:** While health interventions are often shown to have short-term effects, long-term effects are rarely evidenced. Habit formation offers a potential mechanism for health behaviour maintenance in the long-term. However, currently there is little research aimed at gaining rich insights into the way laypeople understand habit formation. We aim to investigate a laypersons understanding of the causal structure of health-habit formation using a network diagram approach.

**Method:** We expect to gather a representative sample of around 100 Australian adults. Participants will be presented with a list of factors which facilitate habit formation before being asked to build a visual (i.e., diagrammatic) representation using these factors. This network diagram approach will show the relationship (i.e., path) strength and the proportion of participants who include the path in the diagram.

**Expected results:** It is expected that laypeople will have understandings of habit formation that fit with scientific representations of the causal structure of habit formation, but also hold personal accounts that may add to current knowledge about habits.

**Current stage of work:** Ethical approval has been granted. Participant recruitment has commenced.

**Discussion:** This research will provide a visual representation of how laypeople believe health-habits form and the strength of those causal pathways. In particular, the research will identify relevant beliefs of habit formation that may or may not support scientific representations. This knowledge will inform the development of interventions which aim to promote long-term health behaviour change by allowing clinicians and researchers to preemptively challenge misunderstandings or beliefs of health-habit formation.

# Well-being & quality of life in adolescents and young adults

15:30 - 17:00

Adriana Baban

15:30 - 17:00

## Resource control, psychosocial health, and well-being in emerging adulthood

L. Closson<sup>1</sup>

<sup>1</sup>Saint Mary's University, Canada

**Background:** As the third decade of life, emerging adulthood presents challenges, but also opportunities for positive development. Emerging adults are at increased risk for experiencing health problems due to difficulties adapting to the rapid changes and pressures they face as they transition to adulthood. Nevertheless, emerging adulthood is characterized by self-exploration and goal pursuit, which are important to well-being. According to resource control theory, individuals pursue their goals using strategies that are either coercive (e.g., intimidation) or prosocial (e.g., cooperation). Although coercive strategies should be linked with maladjustment after childhood and prosocial strategies should predict adaptive functioning across the lifespan, the psychosocial health and well-being of emerging adults who employ both strategies (i.e., bistrategic) is unclear.

**Methods:** Using a correlational design, the present study compared the psychosocial health and well-being of emerging adults ( $N=478$ ;  $M_{age}=20.5$ ) varying in resource control strategies. Participants completed self-report assessments of resource control, internalizing (e.g., stress), externalizing (e.g., anger), positive affect, life satisfaction, and social support. One-way ANOVAs were conducted with planned comparisons using Bonferroni correction.

**Findings:** Compared to coercive and bistrategic controllers, prosocial controllers reported significantly lower internalizing ( $\eta^2=.08$ ) and externalizing ( $\eta^2=.22$ ), and significantly greater positive affect ( $\eta^2=.05$ ), and social support ( $\eta^2=.11$ ). Prosocial controllers also reported significantly greater life satisfaction ( $\eta^2=.03$ ) than coercive controllers. Bistrategic and coercive controllers did not significantly differ.

**Discussion:** Although the literature emphasizes the positive adjustment of both prosocial and bistrategic controllers during childhood and early adolescence, the results suggest that only prosocial control is linked to well-being by emerging adulthood.



15:30 - 17:00

## Electronic device use at night by young adults: Effect on sleep and mental health.

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Psychosocial factors and behavioural choices may exacerbate unique biological delays in sleep-wake cycles in young adults. Electronic media device (EMD) use is pervasive, yet little is known about its impact on sleep and mental health (MH). This study explored young Australian adults' sleep patterns, type and intensity of EMD use before bed and during the night, and MH.

Participants (n = 66) aged 18-24 years (68.2% females) completed an online questionnaire: the Pittsburg Sleep Quality Index, Sleep Hygiene Index, Depression, Anxiety and Stress Scale-21, and EMD use. Analyses included sleep (hygiene, quality, quantity), MH (depression, anxiety, stress) and EMD use.

Most young adults (77%) reported moderate-to-good sleep hygiene behaviours, but 69.5% were classified as poor sleepers and reported symptoms of depression, anxiety and stress; they went to bed, on average, an hour later than adults over 25 years. The most common EMD was a Smartphone; 68% used between three and five EMD's (and up to 15 different activities) in the two hours before bed, for at least 45 minutes; 25% left Smartphones on during the night; 57% reported that EMDs helped them get to sleep; 64% believed they interfered with sleep. No significant differences in sleep quantity, quality, and MH were found between high and low users of EMD's.

Overall, young adults were high users of EMD's which may explain the absence of significant differences; further investigation into the type of activities, rather than intensity of use, may produce useful insights into sleep patterns and MH in this age group.

15:30 - 17:00

## Subjective Health Complaints in Adolescence - Validity of the HBSC Symptom Checklist in Luxembourg

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**Background:** The HBSC Symptom Checklist (HBSC-SCL) consists on an eight-item scale developed for the Health Behaviour in School-aged Children survey to measure adolescent health complaints. Although it was developed based on a RASCH measurement analysis which proved that the items are indicators of a unidimensional latent trait, some studies suggests a two highly correlated dimensions. The objective of this study is to test the validity of the Luxembourgish version of the HBSC-SCL.

**Methods:** The 2014 HBSC Luxembourg survey took place during the 2013/14 school year. A total of 590 classes following the national curriculum were randomly selected and 7 757 students aged from 11 to 18 years old responded to the questionnaire translated to both French and German distributed by their teachers.

**Findings:** First, the Kaiser-Meyer-Olkin criterion and the Bartlett sphericity test indicated the use of a factor analysis ( $KMO=.88$ ;  $p<.001$ ). A Principal Component Analysis with Varimax Rotation (with the Eigenvalues over 1) and a scree plot test suggests a one factor matrix with a total variance explained of 47%.

**Discussion:** Factor analysis support the existence of a single factor for the Luxembourgish population in accordance with the preliminary model developed. Literature have mixed results, with the possibility to compute one or two health complaints scores. More studies should confirm these findings but as the internal consistency possibly depends on the country studied, it is recommended this be systematically checked.

15:30 - 17:00

## A validation study of a German short-form of the Child Humor Orientation Scale

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<sup>3</sup>Ernst-Moritz-Arndt-Universität Greifswald, Germany

**Background:** Studies on children's humor mainly focus on short-term effects of humor on well-being. There is also evidence that children possess the predisposition to communicate humorously ("Humor Orientation" (HO)). Evidence on HO shows benefits on well-being. The aim of this study was to validate a German short-form of the „Child Humor Orientation” Scale (CHO-Scale).

**Methods:** The English CHO-Scale consists of 26 items assessed by a 5-point Likert-type Scale. The translation of the CHO-Scale into German language was accomplished by adopting a forward-backward-translation approach. Afterwards the translated version of the CHO-Scale was validated with a sample of parents from 151 pre-school children within the age range of 3 to 6 years. Then the CHO-Scale was shortened to 16 items on the basis of factor loadings and contentual aspects.

**Expected results:** The exploratory factor analysis of the CHO-26-Scale revealed a two-factor solution. Nevertheless, confirmatory factor analysis indicated inconsistent fit of the data with measurement model of the original version of the English CHO ( $\chi^2(299) = 772.59, p = .000$ ; CFI = .76; RMSEA = .09.; SRMR = .09). It is expected, that the psychometric properties of the CHO-16 data will improve.

**Current stage of work:** To validate the CHO-16, a sample of more than 270 participants is realized.

**Discussion:** The German CHO-16-Scale is suited to be a valid, reliable and economic measure of Humor Orientation in young children which is suited to evince aspects of sense of humor and life satisfaction as well as social competence and anxiety.

15:30 - 17:00

## Promoting Subjective Well-being in Transition Year Students Through a Multi-Target Positive Psychology Intervention

D.B. Gibbons<sup>1</sup>, Z. Di Blasi<sup>1</sup>, M. Murphy<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

**Background:** The current study investigated the effects of a multi-target, multi-component (students and parents) positive psychology intervention on adolescents' subjective wellbeing.

**Methods:** Data was collected from students (N = 44) from one urban, Irish school. Two transition year classes were assigned either to intervention (n = 24) or to a wait list control group (n = 20) using a simple coin toss. A quasi-experimental, mixed methods design was implemented to explore the study's aims. Measures taken at baseline, post-test and one - month follow-up included the Subjective Happiness Scale, Brief Multidimensional Students' Life Satisfaction Scale, PANAS-C, Revised Child Anxiety and Depression Scale – Short and qualitative surveys. A 2x3 ANOVA will be used to analyse the quantitative data and a thematic analysis will be carried out for the qualitative data.

**Expected results:** Based on prior research, it is expected that students in the intervention group will display significant increases in all components of subjective wellbeing (life satisfaction, positive affect, negative affect), with a significant decrease in internalizing symptoms at post-intervention and sustained positive effects at follow-up.

**Current stage of work:** Data collection for this study has concluded. The study will begin data analysis in mid-March. A final draft of the research will be available from April.

**Discussion:** It is expected that the findings of this study will provide preliminary support for the use of evidence-based positive psychology strategies which result in lasting improvements in students' wellbeing and mental health, in an Irish school context.

15:30 - 17:00

## Self-compassion and healthy eating behaviours among emerging adults

S. Ishikawa<sup>1</sup>, Y. Matsuda-Chapman<sup>1</sup>, R. Kawano<sup>1</sup>

<sup>1</sup>J. F. Oberlin University, Japan

**Background:** Growing evidence suggests self-compassion promotes health behaviours. Little is known, however, whether self-compassion is associated with healthy eating behaviour in particular. The present study aims to examine the relationship between self-compassion and healthy eating behaviour in emerging adulthood that is an important developmental period for establishing long-term health behaviours.

**Methods:** A total of 274 Japanese emerging adults (73 males, 201 females, aged 18-25;  $M=20.69$ ,  $SD=1.88$ ) participated in the survey using either a web-based or paper-pencil questionnaire. Age, sex, residence status, consciousness of healthy eating, healthy eating behaviours, and self-compassion that consists of self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification were measured.

**Findings:** Data analysis indicated that women scored significantly higher than men in weight-conscious eating and fresh food choice, whereas men scored significantly higher than women in common humanity and mindfulness. The high self-compassion group (mean + 1SD) demonstrated significantly higher scores in fresh food choice, balanced eating and healthy food conscious. Structural equation modeling revealed that mindfulness was associated with fresh food choice and balanced eating, and this relationship was mediated by consciousness for healthy food.

**Discussion:** This preliminary cross-sectional study implies that mindfulness, one of the sub constructs of self-compassion, increases consciousness for healthy eating, which, in turn, promotes healthy eating behaviours among emerging adults. Future research with longitudinal designs needs to be conducted to verify those Findings:

# Factors influencing quality of life within the context of pain

15:30 - 17:00

Line Caes

15:30 - 17:00

## Pain chronicity regulates the relationship between emotions and sleep in Complex Regional Pain Syndrome

J. An<sup>1</sup>, S. Cho<sup>1</sup>

<sup>1</sup>Chungnam National University, South Korea

**Background:** Complex regional pain syndrome (CRPS) is a chronic disease characterized by severe pain and many patients report sleep problems. Many psychological variables affect sleep, but the relationship between sleep and emotion is especially close. CRPS is characterized by a long period of suffering from pain, suggesting that the duration of the pain may affect the relationship between emotion and sleep.

**Method:** In this study, we conducted a diary study on 24 patients who were registered with the CRPS association in Korea. The questionnaires were conducted in the form of a Google survey, and the patients were asked to complete the questionnaire about sleep in the morning and the questionnaire about emotion and pain in the evening for 14 days. A hierarchical linear model was used for the analysis.

**Result:** The interaction of positive emotion and pain duration on sleep quality were significant. Also, the interaction of negative emotion and pain duration on sleep quality were marginally significant. However, neither the interaction of positive nor negative emotion with pain duration on sleep efficiency was significant. This indicates that the longer the pain duration is, the more the satisfaction with sleep is affected by the emotion of the day.

**Conclusion:** The results of this study suggest that the duration of the pain needs to be considered when dealing with the sleep problems of CRPS patients, and that the longer the pain duration, the greater the degree of intervention needed for the psychological aspects of this disease.

15:30 - 17:00

## Differential effects of attentional engagement and disengagement on daily function in patients with chronic pain

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<sup>2</sup>A Certain Flower Psychological Counseling Center, South Korea

<sup>3</sup>Hearim Medical Clinic, South Korea

Attentional bias is a selective attention to specific information in the environment and can be divided into two types, engagement and disengagement. It has been reported that these two types of attentional bias affect the development and maintenance of chronic pain. The purpose of this study was to investigate whether the type of attentional bias in patients with chronic pain has a differential effect on their daily function. We recruited 10 patients with chronic pain in the oriental medical clinic, Daejeon, South Korea. The participants completed a questionnaire and then performed an engagement-disengagement task involving pain-related and neutral word pairs and eye tracker. They filled out the online diary for 14 days from the day following the task. The data were analyzed by the HLM statistical program. The results of the analysis showed that when participants' engagement with pain-related words was slow, the greater the intensity of pain, the greater the distractibility and disturbance of daily activities. Also, when participants' disengagement from pain-related words was rapid, the greater the intensity of pain, the greater the avoidance of daily activities. This study revealed that the type of attentional bias in chronic pain patients has different effects on their daily function. These findings suggest that patients with chronic pain who slowly engage with or quickly disengage from pain-related words may have difficulties in different areas of their daily function.



15:30 - 17:00

## Quality of life and its determinants in chronic pain patients

U. Ziętałewicz<sup>1</sup>

<sup>1</sup>University of Warsaw, Poland

**Background:** Much is known about low quality of life of patients suffering from chronic pain, as well as about determinants of poor QOL. Also many models of QOL are described and used. Not much research is aimed at verifying these theoretical models. The study's goal was to investigate associations between studied variables and testing Wilson and Cleary's HRQOL model (1995).

**Methods:** A cross-sectional study was conducted on 192 participants (63% females) from Pain Treatment Clinic (diagnoses: cancer, rheumatic disorders, low back pain). The following questionnaires were used: Brief Pain Inventory, Body Image Scale, WHOQOL-Bref, Questionnaire on symptoms of anxiety and depression, and Social support.

**Findings:** The results show that there are no statistically significant differences in pain intensity among three groups of patients. The associations between pain intensity and QOL and different aspects of functioning are moderately or strongly and negatively correlated, as expected based on previous research results. However, the model fit indices, estimated by using structural equation modelling method, do not reach satisfactory level:  $\chi^2(90)=160.02$ ,  $p<.001$ ), CFI = .936, TLI = .855, RMSEA = .125.

**Discussion:** The possible explanations of the poor model fit are discussed. Different methods of improving model's fit indices are proposed.

15:30 - 17:00

## Understanding the experience of chronic pain from the perspective of people with an intellectual disability

D. Phillips<sup>1</sup>

<sup>1</sup>NUI, Galway, Ireland

People with an intellectual disability (ID) may be more susceptible to chronic pain due to associated or comorbid conditions. It is believed that chronic pain is under-recognised and under-reported in this population due to the limitations of caregiver reports and challenges interpreting the signs of pain. Biological, physiological, and social factors all contribute to the experience of chronic pain, however, this approach has rarely been applied to people with an ID. The aim of the study is to understand the experience of chronic pain from the perspective of people with an ID. Participants will be asked to identify the location, intensity, duration, and sensation of their pain. The impact of chronic pain, how people cope, and communicate their pain will also be explored. It is expected that these findings will help us understand the psychosocial impact of chronic pain in ID and inform treatment accordingly. One-to-one semi-structured interviews will be used to qualitatively address the research question. Communication will be supported with visual aids such as body maps. Participants will be recruited through local service providers until data saturation is reached. Interviews will be audio recorded, transcribed verbatim and analysed using content analysis. Local service providers have been initially contacted and the project is currently awaiting ethical approval from NUI, Galway and two service providers. The new insights offered by these findings may help to refine our approach to chronic pain treatment and self-management in this population.

15:30 - 17:00

## How do patients treated by haemodialysis cope with pain?

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<sup>5</sup>Inserm U-1018 Team5, France

**Background:** Many patients treated by haemodialysis (HD) experience pain. However, pain coping strategies have never been explored. The aim of this study was to evaluate HD patients' pain coping strategies and their association with pain and emotional states.

**Methods:** 90 patients having HD (mean age=57.2 years, 56.8% men) were recruited in 6 dialysis centres in France. They completed standard measures of pain (BPI, QDSA), coping with pain (CSQ, CPCI), and depression and anxiety (HADS) at inclusion and 2 month later. In between, patients completed a short questionnaire during each dialysis session to assess their emotions and pain. Statistical analysis included correlations and analysis of variance. Intra-individual and inter-individual changes in pain and emotional state during dialysis sessions will be explored.

**Results:** 60.2% of the patients reported experiencing pain, with a mean severity of 4.04/10 and pain interference with daily life of 3.81/10. 25.8% presented an anxiety state and 12.4% a depressive state. Patients appeared to use a large variety of coping strategies. Patients with high levels of dramatization preferentially use this coping strategy compared to all the others, as well as rest and avoidance. These strategies were associated with pain interference. High dramatization was associated with anxiety and depressive state.

**Discussion:** These results show that whereas most patients treated with HD use various pain coping strategies, dramatization can shorten their range of choices, with fewer and more passive strategies used. Interventions like cognitive reconstruction could help patients with this cognitive style to adopt more flexible responses to pain.

15:30 - 17:00

## Changing pictorial representations of pain when attending a Pain Management Programme: an interpretative phenomenological analysis

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<sup>2</sup>Kent Community Health NHS Foundation Trust, United Kingdom

**Background:** Qualitative research has offered deep insight into the experience of pain, but rarely into how it evolves over time. Pictorial methods facilitate expression and are particularly apt to explore chronic pain, which is elusive and indefinable. In this study drawings and interview data were combined to investigate sufferers' changing relationship with pain.

**Methods:** Six women suffering from chronic pain and referred to a community chronic pain service in England were interviewed at three time points: one month before attending a pain management programme (PMP), one month and six months later. At the start of each interview, participants drew a picture of their pain and one of themselves. The drawings were used to guide a discussion on the impact that pain was having on their lives. Transcripts and drawings were analysed inductively and longitudinally using Interpretative Phenomenological Analysis.

**Findings:** Learning to self-manage pain changed the role of pain in the life of all participants and their drawings revealed different trajectories: some linear, providing insight into how pain acceptance and integration can develop gradually; for others, pain flare-ups interrupted the trajectories revealing how resistances to behaviour change can affect self-management. The changing relationship with pain was entwined with a changing sense of identity for sufferers.

**Discussion:** This longitudinal and multimodal application of IPA offers unique insight into how the relationship with chronic pain can evolve. The drawings, expressive in themselves, facilitated access to the emotional world of participants and, when reviewed retrospectively, triggered deep reflections.

15:30 - 17:00

## Communication, coping and clinical status: a holistic perspective on surgical patients to improve satisfaction

T. Dekkers<sup>1</sup>, B. Groeneveld<sup>1</sup>, M. Melles<sup>1</sup>, N. Mathijssen<sup>2</sup>, S. Vehmeijer<sup>2</sup>, H. de Ridder<sup>1</sup>

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<sup>2</sup>Reinier de Graaf Hospital, Netherlands

Total joint replacement (TJR) surgery is a common procedure with good clinical outcomes. Yet, up to 30% of patients report dissatisfaction after surgery. Satisfaction may improve if care is tailored to specific patient subgroups. However, subgroups are often based on clinical status only, which does not indicate how care should be tailored to patients' needs regarding disease management. Therefore, our aim was to investigate from a biopsychosocial perspective whether subgroups of TJR patients can be defined by clinical, coping and communication characteristics.

191 patients completed questionnaires about their preoperative clinical status, coping behaviour and communication preferences. Subgroups were identified using hierarchical and k-means cluster analyses. The cluster solution was validated in two multivariate analyses that compared clusters on 1) clustering variables and 2) clinical outcomes and satisfaction.

Three clusters with different clinical, coping, and communication characteristics were identified ( $p < .0001$ ). Cluster 1 (44%) had an overall lower health status, more pain and strong preferences for personal communication. Cluster 2 (32%) was characterized by higher health status and less pronounced communication preferences. Cluster 3 (24%) was characterized by higher age, more anxiety, and lower self-efficacy. Clusters also differed in outcomes ( $p = .006$ ): cluster 1 reported less satisfaction with clinical outcomes, cluster 3 was less satisfied with patient-provider communication, while cluster 2 was satisfied with both.

A holistic perspective on patients, incorporating both clinical, coping, and communication characteristics seems required to understand (dis)satisfaction with surgical procedures. The identified subgroups give direction for future tailored interventions, such as patient education and pain coping skills training.

# Resilience & risk factors in pain experiences

15:30 - 17:00

Gabriele Franke

15:30 - 17:00

## The power of resilience in chronic pain patients

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<sup>3</sup>Paracelsus-Clinic an der Gande, Bad Gandersheim, Germany

**Background:** Resilience, the personality characteristic that moderates the negative effects of stress and promotes adaptation, operationalized in the German Resilience Scale (RS-13) of Wagnild and Young, was investigated in patients suffering from chronic pain.

**Methods:** 347 orthopedic patients of two German rehabilitation clinics answered the RS-13 and the BSI-18 with negative correlation between resilience and psychological distress expected. The power of resilience items in predicting low psychological distress was tested.

**Findings:** 55% of the patients reported remarkable psychological distress compared to the German normative sample; the resilience score (M=68, SD=14) was lower compared to German normative data (M=70, SD=12;  $p < .01$ ). The global RS-13 score as well as the two subscales Competence and Acceptance were negatively correlated with physical and mental aspects of psychological distress ( $r$ -min= -0.22;  $r$ -max= -0.55). Highest negative correlations were found between resilience and depression. High levels of depression were predicted by four RS-13 items ( $R^2=.33$ ): “12-I have enough energy to do what I have do (Beta= -0.23)”; “4-I am friends with myself (Beta= -0.22)”, “7-I take things one day at a time (Beta= -0.13).”, “6-I am determined (Beta= -0.13)”; and age (Beta= -0.09). Two of these items were part of the Competence (6,12) and two of the Acceptance scale (4,7).

**Discussion:** In chronic pain patients' resilience is an important predictor for low psychological distress; especially for depression. Therefore, it could be argued that resilience might play an important role as being the “bright side” of psychological distress; longitudinal studies are necessary.

15:30 - 17:00

## Mediating Role of Psychological Flexibility Parameters between Head Pain Interference and Headache-Related Disability

P. Konstantinou<sup>1</sup>, V. Vasiliou<sup>1</sup>, M. Karekla<sup>1</sup>

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Recent years have seen a rise in clinical trials examining the effectiveness of the psychological flexibility model (PF) components in the treatment of chronic illness problems. PF components are found to impact quality of life, suffering and disability and are theorized to constitute the mechanisms via which Acceptance and Commitment Therapy exerts its effects. In order to examine whether indeed PF components act as mechanisms of change, their mediating role between head pain interference and disability needs to be examined. The present study aims to examine whether PF components (low acceptance, high avoidance, high fusion, low committed actions, high values-obstruction) mediate the link between head pain interference and disability. Data were gathered as part of a larger RCT trial. Participants were 100 adults suffering from chronic head pain conditions (e.g., migraines). Participants completed measures assessing the PF components, physical and emotional functioning, headache-related disability and quality of life. Separate mediation analyses showed significant indirect effects of head pain interference on disability through acceptance ( $b=-0.18$ , BCa CI [-0.29,-0.09]), avoidance ( $b=-0.22$ , BCa CI [-0.36,-0.12]) and fusion ( $b=-0.09$ , BCa CI [-0.18,-0.03]). As expected, when acceptance of pain increased, headache-related disability decreased and when avoidance and fusion increased, disability increased. Committed action and values-obstruction were not significant mediators. This study sheds light on possible psychological components mediating the effects of head pain interference on disability. High avoidance, low acceptance and high fusion were found to play a regulatory role between head pain interference and disability. Implications are discussed along with limitations and future directions.



15:30 - 17:00

## The role of dissociation in experiencing pain: a normal function or a deteriorating process?

M. Flouri<sup>1</sup>, E. Karademas<sup>1</sup>

<sup>1</sup>University of Crete, Greece

An emerging body of research indicates some relationship among pain and different kinds of dissociation. We aimed to explore whether dissociation alters the experience of pain in terms of intensity, resistance and emotional distress as well as if pain (1) causes Somatoform (SD) or Peritraumatic Dissociation (PD) and (2) if induced dissociation alters the final levels of SD and PD. We used the Cold Pressor Test to induce pain in 3 groups with different levels of experimentally generated dissociation (control group CG, relaxation RG, dissociation DG). Dissociation was induced through audio/photoc stimulation). Groups did not differ in terms of gender, age or years of education. Findings did not reveal significant differences among the groups in terms of intensity of pain, heart rate variability, emotional distress or levels of SD. However, the difference of time of resistance was statistically significant among the groups. Specifically, DG group endured significantly less than CG group (participants in the CG endured almost twice the time participants in the DG tolerated pain). Participants in all groups were significantly more dissociated by the end of experiment in terms of PD, but there were no differences among the groups. Findings of this study support a growing body of literature arguing that dissociation is an expected reaction in pain with no implications in other functions (e.g. emotion, pain intensity), unless it exceeds the expected levels one would normally have, in which case, pain seems to intensify. Thus, more theoretical and research effort is needed to clarify this complex issue.

15:30 - 17:00

## Somatic complaints, attachment style, childhood trauma, self-compassion and depersonalisation in young Irish adults

C. Ó Curraoin<sup>1</sup>, J. Egan<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

**Background:** Somatic pain symptoms are commonly reported in adults. Research to date has not adequately investigated how common somatic complaints relate to the psychological well-being of young Irish adults. Factors such as childhood abuse/neglect, insecure attachment style, high levels of depersonalisation, and low levels of self-compassion have been found to moderate experiences of pain. The current study examines how these factors relate to an increase in somatic concerns.

**Methods:** A cross-sectional design was employed. A large sample of Irish young adults (18 - 25; N=208 who fully completed the survey of which 258 started) responded to an email inviting them to complete an online survey on childhood experiences and psychological and physical well-being. Standardised measures of the variables above were used. A multiple regression was performed to analyse the predictors of somatic symptoms.

**Findings:** High levels of somatic pain were reported by the sample in the previous month- including being bothered a little or a lot by back pain (51%), headaches (48%), menstrual pain (48%), stomach pain (44%), pain in joints (43%), GI upset (40%), constipation (31%), and chest pain (16%). The overall regression model was significant, with attachment anxiety and depersonalisation being significant predictors of somatic pain.

**Discussion:** This study illustrates the prevalence and correlates of somatic complaints in young Irish adults. Recommendations will be made in relation to primary care practice, as well as how to address future research needs for this young adult population- who are learning to independently interact with the medical services available to them.

15:30 - 17:00

## Gender stereotype threat and pain tolerance in young adults

E. Wojtyna<sup>1</sup>, M. Hyla<sup>1</sup>, Z. Kurasz<sup>1</sup>

<sup>1</sup>University of Silesia, Poland

**Introduction:** Social comparison, including comparisons regarding differences between women and men, might be influencing the pain tolerance threshold. However, research in this area provides inconclusive results. Self-esteem may be a factor moderating the relationship between pain tolerance threshold and gender stereotype threat. Self-esteem can moderate the change in pain tolerance threshold under the gender stereotype threat conditions.

**Aim:** The aim of the study was to determine the role of explicit and implicit self-esteem in pain tolerance threshold change under the gender stereotype conditions.

**Material and methods:** The study consisted of 100 people (50 women and 50 men). Self-esteem is measured using Rosenberg's SES (explicit self-esteem) and Implicit Association Test, IAT (implicit self-esteem). The pain tolerance threshold was determined using the thermal stimulus generated by the TSA-II device. The threshold of pain tolerance was determined twice - before and after introducing the stereotype threat.

**Preliminary results:** Women had a lower pain tolerance threshold than men. A positive correlation was found between explicit self-esteem and pain tolerance threshold. After introducing the gender stereotype conditions, an increase in the pain tolerance threshold was observed in women who had fragile self-esteem (high explicit and low implicit self-esteem).

**Conclusions:** The increase of pain tolerance threshold may be a compensation strategy for people with fragile self-esteem, especially for women who are under gender stereotype threat conditions.

15:30 - 17:00

## Temporal Estimation of Treatment Preferences in Fibromyalgia Patients

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**Background:** Many fibromyalgia (FM) patients report to be unsatisfied with the available treatments. Recently, therapeutic approaches are shifting towards more holistic, multicomponent approach to treat the condition. The aim of our study was to investigate what attitudes FM patients have towards the available treatments and how their thoughts have changed over time.

**Methods:** Fibromyalgia support groups were contacted via social media and a sample of 353 valid respondents was obtained. A survey was created using Qualtrics and consisted of forty-three questions and aimed to identify what treatments patients diagnosed with fibromyalgia believed to be effective at reducing their symptoms in their past, but also those they feel and will feel as effective in the future.

**Findings:** The study revealed the participants' attitudes towards treatments such as pharmacological therapy, the psychological intervention, the physical therapy, the physiotherapy, a multi-component therapy, the choices of alternative treatment and the decision to have no treatments changed over time. When comparing present vs. past we found N=148 respondents had multicomponent treatment in the past compared to present, whereas only N=6 respondents had more multicomponent treatment in the present compared to the past. Additionally, the FM patients reported lower levels of well-being in the present and the future compared to reported satisfaction with their lives in the past.

**Discussion:** Understanding the attitudes towards the available treatments may potentially help to improve healthcare provision to the fibromyalgia patients. Moreover, patient's preferences may help identifying better treatments in terms of perceived efficacy at reducing the symptoms severity.

# Methods for improving research participant diversity

15:30 - 17:00

Diane Dixon

15:30 - 17:00

## Strategies for successful male involvement in the population-based survey: Lessons learned from UN Multi-Country Survey

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<sup>1</sup>NUI Galway, Ireland

<sup>2</sup>University of Ahmad Dahlan, Indonesia

**Background:** The work presented is derived from the UN multi-country study of men and masculinity that aimed to understand violence against women from men's perspective. The purpose of this abstract is to disseminate the lessons learned from the implementation of the survey to help increase men's involvement in the future health research.

**Methods:** The survey was a population-based study targeting 3,000 Indonesian men aged 18 - 49 in 2012. Processes developed in order to engage men to participate, given the very specific topic of the survey, were reviewed and important lessons learned were noted.

**What went well:** A response rate of over 85% was achieved. The following factors identified as important strategies contributing to this high participation rate:

Lesson 1. Develop simple well-structured questions with frequent appreciations throughout the interview

Lesson 2. Same-sex and cultural match of surveyor-respondent

Lesson 3. Sufficient surveyor-supervisor proportion

Lesson 4. Adequate training (including gender and masculinity topics) for both surveyors and supervisors

Lesson 5. Emphasising the importance of listening and empathetic communication skills

Lesson 5. Well planned survey provision

Lesson 6. Encourage respondents' autonomy and assure confidentiality

Lesson 7. Frequent monitoring and evaluation of the survey implementation

**Conclusions:** This research demonstrates the importance of understanding men and their masculinity when developing survey processes to engage them in health research.

**Key words:** health survey, male, men

15:30 - 17:00

## Examining the influence of an informational video on participant retention in a randomised controlled trial

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<sup>4</sup>National University of Ireland, Galway, Ireland

**Background:** Psychological interventions, particularly those without person-to-person contact, have high levels of attrition. RCT research commonly finds retention rates problematic. A recent priority setting exercise with methodological experts across clinical trials unit considered minimising attrition one of three expert priorities.

A Study Within a Trial (SWAT) is a way of building a secondary methodological question into a larger trial. The aim of this SWAT is to examine the effects of an education video on participant retention in an ongoing RCT, the ACTION Study (trial registration: ISRCTN22343024).

**Method:** A 2x2 design (intervention with and without video, control with and without video) will be employed. Participants in experimental and control conditions will be randomised to receive the educational video, or a control video containing basic study information, followed by questions about RCT knowledge. The RCT sample was calculated at 128, expecting a 40% attrition rate. The proportion drop-outs in each group will be calculated and compared quantitatively with a two-sample test of proportions using variables to look for statistically significant differences, and an ANOVA if the data fulfils required assumptions. Qualitative thematic analysis will also be undertaken using post-video responses.

**Expected Results:** We expect to see less attrition and more knowledge of RCTs in groups that receive the educational video.

**Current stage of work:** The SWAT was funded by the Health Research Board TMRN. The trial proper has been piloted and recruitment is underway.

**Discussion:** This SWAT has interesting implications for the recruitment and retention of participants in RCTs investigating health interventions.

15:30 - 17:00

## Assessing Health Information Literacy by a Standardized Knowledge Test

A. Mayer<sup>1</sup>

<sup>1</sup>ZPID - Leibniz Institute for Psychology Information, Germany

The term “health information literacy” denotes a set of abilities which is needed to search, evaluate and use health information to make adequate health-related decisions. Health information literacy is a facet of the broader and more established construct “health literacy”. To assess "objective" levels of health (information) literacy, several performance tests have been developed. These tests, however, only reveal individual differences in basic functional abilities (reading and understanding health information) but fail to capture advanced knowledge and skills related to self-directed information searching.

To fill in this gap, the contribution presents a short forced-choice test, the Health Information Literacy Knowledge Test (HILK) which is based on a skill decomposition derived from general models of information problem solving. The HILK aims at assessing factual knowledge about planning a search for health information in multiple sources, accessing this information, and scanning it for its quality and usefulness.

Two studies with German university students (Study 1: N = 139; Study 2: N = 100) provided evidence for adequate reliability and validity of the test, e.g., significant associations with the HLS-EU-Q47 and a health information literacy screening questionnaire. In both studies, the HILK was administered in supervised group sessions. An additional online study with N = 144 German young adults corroborated the psychometric quality of the test under unsupervised testing conditions. Thus, it is concluded that the HILK may be used in online surveys as an objective measure to complement established subjective measures of health literacy.



15:30 - 17:00

## Conducting Social Cognitive Theory Based interviews with adults with learning disabilities and their carers

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**Background:** Adults with mild-moderate learning disabilities tend to have poorer diets, lower physical activity levels and more sedentary lifestyles than those in the general population. There is, however, a paucity of research investigating the perspectives of this group and their carers using health psychology theory based approaches.

**Methods:** Twenty four adults with mild-moderate learning disabilities and their carers were interviewed using a social cognitive theory based topic guide to understand their perspectives on what may be important to address for future interventions.

**Findings:** A social cognitive theory based approach to interviewing this group and their carers can be implemented successfully, using aids to support participation where appropriate and an iterative design. Rich data was gathered using thematic analysis with 'constant comparison'.

**Discussion:** Theory-based interview studies can be used to guide health promotion interventions with adults with mild-moderate learning disabilities, if measures are taken to support their participation. This may also have implications for analytic methods in future qualitative research with this group, that can create new opportunities for understanding their needs and informing behaviour change interventions with adults with learning disabilities.

# Personal, social, and environmental resources & health

15:30 - 17:00

Evangelos C. Karademas

15:30 - 17:00

## Resilience in adolescents in institutional care

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**Introduction:** The institutionalization of adolescents involve personal, social and family risk. The withdrawal of the family can be perceived as a rejection, not always accepted by the adolescent, in a period of great changes, construction of identity and acquisition of the capacity of resilience.

**Objective:** To evaluate the resilience of adolescents under institutional care and to know the relationship between resilience and gender, age and education.

**Methodology:** An descriptive-correlational study was conducted on a sample of 212 adolescents under institutional care. Data were collected using a questionnaire for sample characterization and a Portuguese adaptation of Resilience Scale (Wagnild & Young, 1993). A Bi-factorial version was used, personal competence (COMP) and self-acceptance and life (ACEIT). Ethical assumptions were met.

**Results:** The adolescents were ages ranging from 10 to 19 years (M =14.58, SD =2.10). Girls was 74.7% and boys 25.3%. They present low mean values of total resilience (M =126.4, SD =26.1) according the values of scale. There are significant differences in gender resilience, with boys presenting significantly higher values ( $t = -3.87, p < 0.001$ ; COMP,  $t = -3.61, p = 0.001$ , ACEIT,  $t = -3.73, p > 0.001$ ), but not between the resilience and the age or education.

**Conclusions:** These adolescents didn't present high Resilience. Temporary institutional care appears to be an obstacle to resilience development. Boys are more resilient than girls.

15:30 - 17:00

## Acceptance and identity change: an interpretative phenomenological analysis of carers' experiences in ME/chronic fatigue syndrome

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**Background:** Myalgic encephalopathy (ME) or chronic fatigue syndrome (CFS) is a debilitating chronic condition and many people rely heavily on family members for care. Few qualitative studies have explored the wellbeing of informal carers in ME/CFS; this study aimed to explore family carers' experiences and how caring may affect their quality of life.

**Methods:** The study had a qualitative design using interpretative phenomenological analysis. One-to-one semi-structured interviews were held by phone or Skype with 7 carers (4 men) recruited from ME/CFS support organisations in England (aged 34–62 [ $x = 51.9$ ;  $SD = 9.95$ ]; mean caring time 8.5 years [ $SD = 8.46$ ]).

**Findings:** Five superordinate themes were established: relations with others; identity change; uncertainty as a stressor; ways of coping; and experiences of information and support seeking. Caring in ME/CFS disrupted multiple areas of carers' lives including self-identity and relationships. Navigating shifting roles was stressful, leaving carers little spare time and restricting social contact. It also forced some spouses to re-evaluate their relationships. Scepticism from others about ME/CFS reduced carers' social support, leaving some feeling isolated. Acceptance was reported as important for coping, and accepting role and identity changes helped some carers achieve positive growth within spousal relationships.

**Discussion:** Carers had unmet needs for support that could inform interventions to improve their wellbeing. Acknowledging their care burden and including carers in family-based interventions could help healthcare professionals address carers' needs. More research is needed to explore factors enabling carer acceptance, including of the relational changes experienced by spousal carers.

15:30 - 17:00

## Long-term effects of coping on psychological distress in caregivers of patients with Amyotrophic Lateral Sclerosis

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**Background:** Caregivers of patients with Amyotrophic Lateral Sclerosis (ALS) often experience psychological distress. They are faced with stressors such as the diagnosis of their loved one and accumulating caregiving demands. How caregivers respond to these stressors might influence the development of psychological distress. The objective of this study was to assess psychological distress over time and to investigate the influence of coping styles on the development of distress.

**Methods:** Fifty-four caregivers were followed in a RCT for patients in the early stage of Amyotrophic Lateral Sclerosis (ALS). Questionnaires were administered at baseline, 4, 7 and 10 months. Psychological distress was assessed using the Hospital Anxiety and Depression Scale (HADS) and task-, emotion-, and avoidance-oriented coping styles were identified with the short version of the Coping Inventory for Stressful Situations (CISS-21). Analyses were performed using linear mixed models.

**Findings:** Caregivers' psychological distress increased with 0.24 points on the HADS per month (CI: 0.06-0.43,  $p = 0.01$ ). An emotion-oriented coping style was associated with psychological distress in caregivers ( $b = 0.90$ , CI: 0.64-1.17,  $p < 0.01$ ), but did not influence the development of psychological distress over time. The avoidance-oriented coping style and the task-oriented coping style were not significantly related to psychological distress.

**Discussion:** Feelings of distress increase in ALS caregivers during the course of the disease of the patient and emotion-oriented coping is related to increased psychological distress. This knowledge enables the identification of caregivers at risk for psychological distress and guides the tailoring of interventions to diminish psychological distress.

15:30 - 17:00

## Cognitive impairment in stroke patients is associated with anxious and depressive symptoms in family members

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**Background:** Cognitive impairment is common post-stroke, and is associated with increased levels of disability and dependency, leading to a greater burden on family members. The aim of this study was to explore associations between cognitive impairment in stroke survivors and anxious or depressive symptoms in family members five years post-stroke.

**Methods:** As part of a five-year follow-up of the Action on Rehabilitation and Secondary Prevention Interventions in Stroke (ASPIRE-S) cohort of stroke patients, family members completed a self-report questionnaire. Symptoms of anxiety and depression were assessed using the HADS-A and CES-D. Cognitive impairment in stroke survivors was assessed using the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE score >3.3).

**Findings:** 77 family members participated, of whom 71 completed the HADS-A, and 51 the CES-D. Family members were spouses/partners of stroke patients (n=49, 63.6%), adult children (n=22, 38.6%) or siblings (n=6, 7.8%). The majority was female (n=62, 80.5%). Depressive symptoms were evident in 25.5% of family members, with 19.7% reporting symptoms of anxiety. Twenty-two stroke patients (29.0%) were identified as having evidence of cognitive impairment. Family members of stroke patients with cognitive impairment were significantly more likely to report depressive [OR (95% CI): 8.00 (1.99, 32.14)] or anxious symptoms [OR (95% CI): 7.00 (2.05, 23.87)].

**Conclusion:** Cognitive impairment in stroke patients is significantly associated with depressive and anxious symptoms in family members. Family members play a key role in the care and rehabilitation of stroke patients. Enhancing their psychological wellbeing and identifying possible ways to decrease burden is essential.

15:30 - 17:00

## Feasibility testing of a staff training programme to improve the mealtime experience in care homes

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**Background:** The health and wellbeing of care home residents is influenced by their experience of mealtimes, which provide an opportunity for residents to socialise and exercise control over their lives, as well as providing essential sustenance. Care home staff are pivotal to this experience, responsible for the provision of meals and eating assistance, but also for establishing a positive mealtime culture valued by residents. Despite this, mealtimes can be task-focussed, as the pressure on staff to perform multiple duties in limited time, or a lack of knowledge and awareness, mean that resident needs and preferences risk being neglected.

**Methods:** A staff-focussed training programme aimed at improving social interaction, resident choice, and independence was developed and delivered in a workshop. Intervention feasibility was assessed using a qualitative survey and workshop observations. A combination of descriptive and content analyses were conducted on the data.

**Results:** Thirteen women and one man took part in the workshops, representing multiple roles within two homes in the South West UK. The workshops were found to be deliverable and practicable. Participants responded positively to the workshops, anticipating that improvements to the mealtime experience would result from their workshop outputs.

**Conclusion:** This study suggests that staff training workshops based on the improving the mealtime experience are feasible to deliver within the day-to-day running of a care home, and are acceptable to staff. Positive changes resulting from these workshops could improve the health and wellbeing of residents.

15:30 - 17:00

## Eating well: Understanding and shaping the mealtime experience of older adults in residential care

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**Background:** The aim of this project was to gain an insight into care home residents' experiences of mealtimes in order to inform the development of a mealtime intervention. By addressing the issues that impact on residents' enjoyment of meals, interventions may target improvements in the health and wellbeing of residents more effectively.

**Methods:** This project is comprised of three pieces of empirical work conducted using multiple methods: (1) a systematic review of stakeholder perceptions of mealtimes, (2) semi-structured interviews conducted with eleven residents from four care homes in the South West UK, and (3) the development of a staff-focussed training programme using the process of Intervention Mapping (IM) as a guide. Fourteen staff from two care homes participated in the feasibility study, which investigated the deliverability of the training programme and the acceptability of its content.

**Findings:** The systematic review and resident interview study revealed that the dining experience was a focal point for residents' broader experiences of residing in a care home. Whilst meal quality and enjoyment impacted on the dining experience, the provision of care was pivotal in determining mealtime culture and resident agency within the home. This had implications for self-efficacy and social relationships, particularly in the context of transitioning from independent living to a care home community. These findings informed the development of a mealtime intervention, which was found to be deliverable and acceptable to staff.

**Conclusion:** Evidence from the empirical work supports the development of interventions aimed at mealtime staff to improve resident self-efficacy.



15:30 - 17:00

## A qualitative exploration of the health and well-being among religious leaders.

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**Background:** Religious leaders have been found to report higher amounts of positive affect, and life and job satisfaction/fulfilment, in comparison to a lay population. However, religious leaders have also been found to experience large amounts of perceived stress, emotional exhaustion, depersonalisation, spiritual dryness, and burnout, often to a larger extent than their lay counterparts. These experiences have been shown to vary according to a number of factors, including age, gender, type of religious leader, denomination, celibacy vows, and living arrangements. These points support the notion that religious leader health and well-being are complex structures with many unique characteristics worthy of exploration.

### Methods

**Design:** A qualitative design study was employed in this study

**Participants:** Individuals with recognised authority within a religious body represented this study's sample.

**Data Collection:** The data sampling method employed was purposeful sampling. Data was collected through one-to-one semi-structured interviews, typically one hour in length. Participants were asked a series of open-ended, flexible questions regarding their health and well-being.

**Data Analysis:** Data was analysed through interpretative phenomenological analysis (IPA).

**Expected results:** The emergent research themes will be discussed after in-depth analyses of the interview transcripts.

**Current stage of work:** The interview schedule is in the final stage of development.

**Discussion:** Important implications of this study may include: a deeper understanding of the lived experience of religious leaders; expanding the literature on the soul construct of health and well-being; and aiding in clinician and counsellor awareness of religious leader health and well-being.

# Innovative interventions in chronic disease

15:30 - 17:00

Anita DeLongis

15:30 - 17:00

## A randomised controlled feasibility trial of an intervention to reduce distress in Inflammatory Bowel Disease

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<sup>3</sup>Guy's and St Thomas' NHS Foundation Trust, United Kingdom

**Background:** Depression and anxiety are higher in Inflammatory Bowel Disease (IBD) than the general population. To address this, a novel IBD specific self-management manual (QOLITI) with minimal therapist telephone support was developed. The manual was grounded in evidence-based interventions together with patient and professional input. This study assessed the feasibility and acceptability of the QOLITI.

**Methods:** A two-arm pilot randomised control trial (NCT02707068) was conducted. Recruitment was through hospital clinics and the Crohn's and Colitis UK website. Participants were eligible if they had a confirmed diagnosis of IBD and scored in the moderate-high range of depression on the PHQ-9. Patients were randomised into either the intervention arm of QOLITI manual plus three telephone support sessions (n=32) or waitlist control arm of usual care (n=31). Questionnaires were administered pre- and post-intervention (8 weeks).

**Findings:** 97% of patients approached in clinics were eligible and 50% subsequently consented. 85% of patients who began the trial were retained. 80% in the treatment arm completed at least 1 telephone session. Semi-structured interviews indicated a high level of acceptability with willingness to actively engage with the manual, despite challenging tasks.

**Discussion:** Good feasibility and acceptability was shown for a self-directed manual targeting distress. It is feasible to recruit participants from clinics and retain them through an 8 week intervention. Telephone support was helpful to guide progress through the manual. Feedback on the manual was positive and further testing following MRC guidelines will continue to test the effectiveness, cost-effectiveness and implementation of the QOLITI.

15:30 - 17:00

## Quality of life and ventilatory self-management in Obstructive Sleep Apnoea Syndrome patients: a prospective study

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**Background:** It is well known that patients with Obstructive Sleep Apnoea Syndrome (OSAS) undergoing ventilatory therapy have self-management difficulties and psychosocial comorbidities. Aim of the study is to evaluate the subjective impact in everyday life of non-invasive ventilation self-management in OSAS patients after interdisciplinary rehabilitative intervention.

**Methods:** All patients, with recent OSAS diagnosis admitted at ICS Maugeri Spa-SB, Institute of Montescano (PV) for adaptation to ventilatory therapy, were considered eligible for the prospective study (inclusion criteria: younger than 75 years, without severe clinical or psychiatric conditions). Data were collected in three different times: baseline, after two-week adaptation to ventilatory therapy and yearly follow-up. Instruments: Hospital Anxiety and Depression Scale (HADS), EuroQoL VAS, Epworth Sleepiness Scale (ESS).

**Preliminary and expected results:** Preliminary data (baseline and first follow-up) are here presented. At baseline, 82 OSAS patients (57.2±10.2 years old; Apnoea Hypopnea Index-AHI: 43.2±22.2, Body Mass Index-BMI: 32.1±5.7) showed a low percentage of moderate-severe anxious (13,4%) and depressive (8,5%) symptoms. Statistical analysis was performed using ANOVA for repeated measures and patients reported a significant improvement ( $p=.0001$ ) after two weeks of different type of ventilatory therapies in perceived health status (EuroQoL VAS 72.1±18.2 vs 84.5±16.7), in daytime sleepiness (ESS 6.2±6 vs 2.7±2) and in number of AHI (43.2±22.2 vs 3.7±3.9).

**Current stage of work:** Recruitment and yearly follow-up are still ongoing.

**Discussion:** By increasing sample size and follow-up, we expect to obtain exhaustive information on psychosocial and clues to improve ventilatory therapy self-management.

15:30 - 17:00

## promoting Medication Adherence and Self-management among kidney transplant recipients (MARS-trial): development of an intervention protocol

D. Beck<sup>1</sup>, M. Tielen<sup>1</sup>, S. Ismail<sup>1</sup>, J. van de Wetering<sup>1</sup>, T. van Gelder<sup>1</sup>, C. Boonstra<sup>1,2</sup>, W. Weimar<sup>1</sup>, J. van Busschbach<sup>1</sup>, J. van Saase<sup>1</sup>, E. Massey<sup>1</sup>

<sup>1</sup>Erasmus MC, Netherlands

<sup>2</sup>De Viersprong, Netherlands

**Introduction:** After kidney transplantation patients must adhere to a lifelong immunosuppressive medication regime in combination with other lifestyle recommendations. Nonadherence to this regimen has been demonstrated to be substantial in all age groups, undermining optimal health outcomes. Current adherence promoting interventions have a few limitations and effective interventions are scarce. We aimed to develop an intervention for enhancing adherence among nonadherent kidney transplant recipients anticipating shortcomings of current interventions.

**Methods:** In order to develop an improved intervention, literature was reviewed to outline shortcomings of current interventions and assess known determinants for nonadherence. Based on these findings, evidence-based theories and methods were selected and translated to the population of nonadherent adolescent and adult kidney transplant recipients (ages > 12 yrs).

**Results:** The developed intervention is outreaching (home-based) and multisystemic (involves social network of the transplant recipient). During the intervention sessions, determinants of nonadherence on various ecological levels will be assessed with the patient in dialogue with the social network and treatment goals will be formulated. Based on the intervention protocol the patient works towards achieving treatment goals. Duration and frequency of the intervention are not determined a priori, but will be determined by the achievement of goals.

**Conclusion:** The intervention is designed to improve adherence to immunosuppressive medication and lifestyle recommendations based on the principles of multisystemic therapy and behavior change techniques derived from health behavior change theories. The intervention is unique in that it is outreaching, tailored to the needs and situation of each individual and addresses multiple ecological levels.

15:30 - 17:00

## Comparing interventions to increase physical activity to anti-hypertensive monotherapy in people with hypertension

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**Background:** Common methods for controlling hypertension include prescribing anti-hypertensive medication, a pharmacological approach, and increasing physical activity, a behavioural approach. In general, little is known about the comparative effectiveness of these approaches. Results from a network meta-analysis conducted by Naci and Ioannidis (2013) suggested that physical activity interventions may be just as effective as many anti-hypertensive medications in preventing mortality. This analysis did not provide the comparative effectiveness of these disparate modes of intervention on the more proximal outcome of blood pressure reduction.

**Methods:** A systematic review will be conducted focusing on randomised controlled trials of physical activity interventions and first-line anti-hypertensive therapy interventions where blood pressure reduction is the primary outcome. We will search the Cochrane Library, MEDLINE and PsycInfo. For studies which meet our inclusion criteria, two reviewers will extract data independently and assess the quality of the literature using the Cochrane Risk of Bias Tool. Network meta-analyses will be conducted to generate estimates of comparative effectiveness of each intervention class and rankings of their effectiveness, in terms of reduction of both systolic and diastolic blood pressure.

**Expected results:** If the results conceptually replicate those of Naci and Ioannidis, then it is expected that many of the anti-hypertensive classes will reduce blood pressure to a similar extent to physical activity interventions.

**Current stage of work:** The systematic search and screening has been completed and data extraction is about begin.

**Discussion:** This study will provide evidence regarding the comparability of two common first-line treatment options for people with hypertension.

# The work environment & employee health

15:30 - 17:00

Massimo Miglioretti

15:30 - 17:00

## Simulator sickness in man-man-machine interaction in complex virtual environment

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<sup>2</sup>Silesian University of Technology, Poland

**Background:** In this paper we propose studies and analyses schema related to the psychophysical state of simulator users. Within the project a simulator with virtual environment that allows group of people (e.g. security guard officers) with real equipment (e.g. cars) to train different scenarios is built. The simulator users are interacting both with other colleagues and virtual surroundings. The virtual environment in the simulator causes the so-called simulator sickness. Analysis of the effects of the disease on the users of a given simulator may allow you to propose a procedure to use the simulator to minimize or control the symptoms of the simulator sickness.

**Methods:** The analysis of this type of reaction goes beyond man-machine interaction and is actually a man-man-machine interaction. The data will collect using some tools: Simulator Sickness Questionnaire (Kennedy et al), STAI (Spielberger et al.), CISS (Endler, Parker), eye-trackers.

**Expected results:** The effect of such a complex simulation environment on the user's psychophysical state may go beyond the framework described in the literature. This implies that, in addition to classical studies on the influence of the virtual environment on the psychophysical state (symptoms of the simulator sickness, coping with stress and level of fear), the effects of human-human-machine interactions and interpersonal interactions should also be included in the study.

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15:30 - 17:00

## Dynamic office workstations: initial insights into user usability evaluations and motivation

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Dynamic office workstations represent a promising way to address the problem of inactivity at work, as they combine light physical activity with office tasks. In order to overcome the lack of structured implementation of such devices in office environments and the difficulty of stimulating employees to engage in healthy behaviours, the aim of this study was to investigate employees' motivation, the perceived usability (e.g., operability) and perceived and expected effects (e.g., general health expectations) regarding the use of dynamic office workstations.

Two different types of devices were made available to thirty employees (13 females; M = 43, SD = 11.51 years) for 6 weeks. Motivation of the use of workstations was assessed pre- and post-intervention and perceived usability and perceived and expected effects was assessed post-intervention through self-reported questionnaires. Descriptive statistics and Wilcoxon tests were conducted.

The employees used both devices at least 6 times during the six week period. The usability of the workstations was reported to be acceptable by the employees, as the devices did not impede their work activities. Furthermore employees reported to be autonomously motivated towards using either workstation as indicated by high scores on identified, integrated and intrinsic motivation. The findings also showed that employees expected to perceive increased health effects when using the devices.

Dynamic office workstations are suitable for daily use, especially regarding the operability. Although participants did not indicate that the workstations impeded in their work activities, other results suggest the flexible use of the workstations depending on the tasks at hand.

15:30 - 17:00

## Sleep quality and environmental workplace factors associated with mental health status of workers in Singapore

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**Background:** Mental health disorders are one of the main contributors of disease burden worldwide. Recent research suggests that poor sleep quality leads to the development of mental health disorders. Therefore, this study aims to examine the relationship between sleep quality and mental health among full-time employees in Singapore.

**Methods:** A cross sectional study was conducted with 450 participants. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). Poor sleep quality was defined as PSQI >5. Mental health was assessed using the 12-item General Health Questionnaire (GHQ-12). Poor mental health was defined as GHQ-12 >3. We used multiple logistic regression analysis to identify factors associated with poor mental health.

**Findings:** The mean age of participants was 39 ( $\pm 11.5$ ), and 21% were women. The prevalence of poor mental health was 11.6%. In fully-adjusted multivariate analyses, poor sleep quality was associated with poor mental health (OR:2.99, 95% CI:1.45-6.16). Poor mental health was more common among younger employees (OR:0.96, 95% CI: 0.93-0.99) and those experiencing greater stress at work (OR:4.27, 95% CI:1.07-17.03). Employees with lower satisfaction with environmental noise (OR:1.34, 95% CI:1.04-1.71) and lower thermal comfort (OR:1.60, 95% CI:1.16-2.20) in the workplace were more likely to have poor mental health.

**Discussion:** Poor sleep quality was associated with poor mental health even after adjustment. Thus, it is important to improve sleep quality to enhance mental health. Workplace health campaigns should aim to increase employees' knowledge of proper sleep hygiene. Environmental workplace factors, specifically noise and thermal comfort, may also affect employees' mental health.

# Individual differences in stress reactivity, emotion-regulation, and coping

15:30 - 17:00

Peter Harris

15:30 - 17:00

## Individual differences in Work-related Behavior and Experience Patterns: Relations to Positive and Negative Affectivity

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Positive and negative affectivity are basic traits that can explain various differences between individuals regarding well-being, job satisfaction or perceived stress. Based on these traits, the affective profile model allocates individuals to four groups of emotionality: Self-fulfilling (SF: high PA, low NA), Low Affective (LA: low PA, low NA), High Affective (HA: high PA, high NA), and Self-destructive (SD: low PA, high NA). Similar to that, the Work-related Behavior and Experience Pattern (AVEM) portrays four types of persons that differ in their appraisal of work related circumstances: Healthy ambitious (Type H), Unambitious (Type U), Excessively ambitious (Type A), and Burnout (Type B). In a sample of 797 individuals (mean age=35.07, SD=12.49; 78% females), we investigated these two approaches together. To identify resemblances, we calculated cross tabulation and regression analyses. Cross tabulation indicates clear associations between Type H and SF, Type U and LA, and Type B and SD, with  $\kappa = .24$ ,  $p < .001$ . Contrary to our assumptions, PA seems to play a minor role within Type A. This was confirmed by the regression analyses, as the probability score of Type A is the only one not significantly associated with PA. For every other AVEM type, regression coefficients indicate main effects for PA and NA as well as their interaction. Especially for the healthy (Type H) and unhealthy behavior (Type B), PA and NA seem to be quite important (27% and 28% explained variance). Overall, our findings confirm the crucial role of trait emotionality in the work context.

15:30 - 17:00

## Identifying risk for depression, anxiety symptoms and maladaptive coping according to time perspective

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**Background:** time perspective (TP) can be described as an individual's attitude toward personal past, present and future. TP plays a role in several areas of psychological functioning and impacts actual thoughts and behaviors, suggesting that it could influence adaptive behavior and mental health. However, it has been seldom studied in mental health. This study investigates the role of TP in depression, anxiety and coping.

**Method:** 211 participants were asked to answer time perspective (ZTPI), depression (BDI-13 and the MINI criteria for Major Depressive Disorder (MDD), anxiety (STAI) and coping (CISS) self-reported inventories. Participants answering the MDD criteria and having a BDI score >7 were considered as clinically depressed. Participants not answering the MDD criteria and having a BDI score <4 were considered as not depressed.

**Results:** 1) 39 (18.5%) participants clinically depressed had a significantly altered temporal profile: they displayed a negative view of the past, a fatalistic attitude towards life, and a lack of future orientation, when compared to the 39 non-depressed participants (18.5%).

2) Considering all participants (n=211), negative past and fatalistic present predict anxiety and depressive symptoms, and maladaptive coping strategies (deny, blame, and self-accusation). Inversely, positive past and future orientation predict adaptive strategies such as active coping.

**Conclusion:** these results suggest that a specific TP could be considered as vulnerability for depression and anxiety, and could help explaining individual differences regarding coping strategies. This encourages further studies on the role of TP in mental health and adaptive behavior.

**Key words:** time perspective, depression, anxiety, coping

15:30 - 17:00

## Assessing the interaction between SSRI use and weight status in predicting levels of depression

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**Background:** There is a dose-dependent relationship between body mass index (BMI; kg/m<sup>2</sup>) and depression, with overweight (BMI=25-29.9kg/m<sup>2</sup>) and obese (>30kg/m<sup>2</sup>) individuals displaying greater depression severity compared to those with normal weight (18.5-24.9kg/m<sup>2</sup>). Antidepressant medication, particularly selective serotonin-reuptake inhibitors (SSRIs), have the known side effect of weight gain; however, its impact on depression scores among individuals of as a function of weight status warrants further study. The present study assessed whether baseline SSRI use and weight status predicted depression at a 5-year follow-up.

**Methods:** 378 patients presenting for exercise stress tests (Mage[SD]=61[9]) participated in a study assessing the impact of exercise-induced ischemia of cardiovascular events. Participants completed baseline measures, including depression (Beck Depression Inventory; BDI), SSRI use, plus weight and height. BDI scores was also assessed 5-years later. GLM assessed the interaction between weight status and SSRI use on BDI scores at 5-year follow-up. Covariates included age, sex, and baseline BDI scores.

**Results:** After adjusting for covariates, weight status predicted elevated BDI scores at 5-year follow-up ( $F=4.05, p=.018$ ); individuals characterized as overweight ( $M[SD]=9.6[0.8]$ ) and obese ( $M[SD]=9.3[0.9]$ ) had significantly elevated BDI scores compared to normal weight individuals ( $M[SD]=7.6[0.8]$ ). SSRIs did not predict BDI scores ( $F=1.62, p=.204$ ) and there was no weight by SSRI interaction ( $F=.01, p=.982$ ).

**Conclusion:** The present study found that weight status, but not SSRI use, predicted depressive scores at a 5-year follow-up. Findings suggest SSRIs does not have differential effects on depression of individuals of different weight status, and may not improve depression symptoms in patients referred for exercise stress tests.

15:30 - 17:00

## To sleep or not-to-sleep: Psychological distress, intolerance of uncertainty and sleep among informal cancer caregivers

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**Background:** Disrupted sleep is a significant concern for informal caregivers of cancer patients. While research has demonstrated associations between internalizing disorders and sleep, identifying person-level factors to serve as targets for intervention is an unmet need. We examine whether anxiety, depressive symptoms, and post-traumatic stress are related to sleep problems among cancer caregivers. Moreover, we determine whether intolerance of uncertainty (IU), the ability to tolerate a negative event occurring in the future, contributes to sleep disturbances beyond the effects of anxiety, depressive symptoms and post-traumatic stress.

**Methods:** Data were collected through an online survey of 61 parent caregivers of adolescents and young adults with cancer. Depressive symptoms, anxiety, post-traumatic stress symptoms, IU and sleep were assessed with validated self-report measures.

**Findings:** On the Insomnia Severity Index, 11% of the sample reported moderate to severe clinical insomnia, 49% reported sub-threshold levels, and 39% had no insomnia. All three aspects of psychological distress were individually related to sleep disturbances in multiple regression analyses. When combined, they explained 34% of the variance ( $p_s < .001$ ) though only depressive symptom remained significant ( $p = .03$ ). IU predicted sleep disturbance beyond the effects of depressive symptoms, anxiety, and post-traumatic stress ( $\Delta R^2 = .08$ ,  $p = .009$ )

**Conclusions:** IU is an important transdiagnostic factor in many psychiatric disorders, but also has implications for behavioral outcomes, such as sleep. Although uncertainty management interventions are primarily designed to reduce distress among patient populations, they may also reduce sleep disruptions among informal parent caregivers.

15:30 - 17:00

## Developing and testing an individual differences measure of self-affirmation: Predicting health-related responding

P. Harris<sup>1</sup>

<sup>1</sup>University of Sussex, United Kingdom

**Background:** Research into self-affirmation and health has largely employed experimental manipulations. In this research we address individual differences in the tendency to respond to threats with self-affirming cognitions and examine the role this tendency plays in predicting health-related responses.

**Methods:** The research programme involves a large number of studies involving both community and student participants (typical sample size, N = 200+). We use Exploratory and Confirmatory Factor Analysis and Structural Equation Modelling (SEM) to analyse cross-sectional, longitudinal and experimental data.

**Findings:** Items we designed to measure responding to threats with self-affirming cognitions were well represented by three first-order factors and loaded on a higher-order factor, creating the Spontaneous Self-Affirmation Measure (SSAM). In competitive SEM analyses, the SSAM was an independent predictor of a large number of health-related outcomes including measures of responsiveness to threats, to risk information in general, and to health-risk information in particular.

**Discussion:** The studies provide evidence about the correlates of individual differences in reported spontaneous self-affirmation in response to threat. The presentation will focus in particular on the elements of the findings relevant to understanding the implications of individual differences in self-affirmation for the processing of health-risk information and for health behaviour.



# Stress & physiology: work in progress

15:30 - 17:00

Samantha Dockray

15:30 - 17:00

## Heart rate variability recovery as a marker of autonomic functioning in lonely individuals

C. Roddick<sup>1</sup>, F. Chen<sup>1</sup>

<sup>1</sup>The University of British Columbia, Canada

**Background:** The primary objective of this study is to examine how loneliness may adversely contribute to cardiovascular disease risk by assessing high-frequency heart rate variability (HF-HRV). No research has yet investigated the effect of acute experiences of loneliness on HF-HRV.

**Methods:** HF-HRV recovery following an episode of loneliness will be assessed in a between-subjects design. A brief experience of loneliness will be induced in the lab using a standard procedure adapted from previous research. Based on an effect size distribution analysis of 297 HRV effect sizes, a sample of 240 is required to ensure sufficient statistical power. Loneliness will be measured on the UCLA Loneliness Scale and three 5-minute recordings of each participant's HF-HRV (before, during, and after loneliness induction) using an eMotion Faros 180° monitor will be analyzed using Kubios software. Regression analyses and multilevel modelling will be conducted to assess within- and between- person effects of loneliness on HF-HRV.

**Expected Results:** It is hypothesized that 1) HF-HRV will change significantly from baseline during loneliness, and 2) that due to less flexible autonomic functioning, the HF-HRV of lonelier individuals will take longer to recover to baseline than the HF-HRV of less lonely individuals following the loneliness experience.

**Current stage of work:** The study is awaiting approval by the local Research Ethics Board. Once approval is granted, participant recruitment will commence.

**Discussion:** This study is expected to increase understanding of how loneliness impacts cardiovascular health. Such research is important given the serious health risks, including earlier death, associated with loneliness.

15:30 - 17:00

## A scoping review of the intergenerational transmission of altered cortisol parameters following trauma.

E. Purkiss<sup>1</sup>, S. Macken<sup>1</sup>, O. Jump<sup>1</sup>, A. Veale<sup>1</sup>, S. Dockray<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

**Background:** Much of the research examining the biological correlates of intergenerationally transmitted stress has been dedicated to examining the dysfunction of the HPA system in offspring of parents who experience stress. Whilst the research has sought to provide explanation for the mechanisms through which alterations to the HPA axis occur from one generation to the next it has failed to outline the extent of the alterations to the HPA system. The aim of this review is to synthesise the literature clarifying the trajectories of altered HPA functioning. The main research question is to understand to what extent does trauma in generation one (G1) affect cortisol parameters in generation two (G2)

**Methods:** Twelve databases to include PubMed and PsycINFO were searched and Covidence is used to screen titles, abstracts, full texts and reference lists for inclusion. Two reviewers independently undertake the screening process and results are reviewed by a third reviewer. First reviewer will abstract the data and conduct a descriptive review of final studies that meet criteria.

**Expected results:** Results are expected to synthesise the research in this area to form a coherent understanding of the levels of alteration of cortisol functioning across different methods of cortisol measurement, in different populations from infancy to adulthood across different levels and types of trauma.

**Current stage of work:** The full text screening by independent reviewers is currently underway.

**Discussion:** The current study will enhance understanding of the magnitude of the impact of parental trauma on offspring HPA functioning as measured using cortisol.

15:30 - 17:00

## Loneliness and cardiovascular reactivity to acute stress in older adults

E.G. Brown<sup>1</sup>, A. Creaven<sup>1</sup>, S. Gallagher<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Limerick, Ireland

**Background:** Research suggests that loneliness is a significant health risk for older adults. Stress reactivity may represent an important psychophysiological pathway through which loneliness influences cardiovascular health. The aim of the study is to examine the relationship between loneliness and cardiovascular reactivity to acute stress in older adults.

**Methods:** A sample of adults aged 55 and above will complete the UCLA Loneliness Scale and participate in a stress-testing protocol involving acute psychological stressors. Cardiovascular activity will be measured continuously throughout. Data will be analysed using mixed ANCOVAs and linear regressions.

**Expected results:** Based on previous research, we expect that higher levels of loneliness will be associated with atypical (i.e., blunted or exaggerated) cardiovascular responses to stress.

**Current stage of work:** Participant recruitment is ongoing.

**Discussion:** It is anticipated that the findings will further contribute to our understanding of how loneliness relates to cardiovascular reactivity to stressors.

15:30 - 17:00

## Building trauma resilience among military personnel: A pre-deployment resilience-building programme - Phase 1 Systematic review

C. Doody<sup>1</sup>, K. Sarma<sup>1</sup>, J. Bogue<sup>1</sup>, J. Egan<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

### Background:

Objective 1. Provide a synthesis of the theoretical orientation, content and structure of resilience-building programmes. Robustly review all current military and emergency services specific resilience building programmes.

Objective 2. Examine the effectiveness of resilience-building programmes on primary outcomes (e.g acute stress responses) and secondary outcomes (e.g mood, aggression).

Method: Studies examining the effectiveness of resilience building programmes on personnel serving in the military or front line emergency services are the focus of this review. RCT's and quasi-experimental studies will be included. Studies must a) have been published since 2001 (pre Afghan/Iraq wars) b) report pre-post intervention resilience levels. c) assess the impact of the intervention using a before-after/treatment vs controls design.

Expected results: The review will compose of two parts, 1) Synthesis of information, and 2) Critical evaluation of the effectiveness of current pre-deployment programmes.

Synthesis of information will gather information on the following topics; Theoretical orientations and integrations, specific techniques, target populations, design, approach to evaluation (e.g. outcome and process).

Critical evaluation will involve assessing the effectiveness of individual interventions in building resilience and may include meta-analysis where the data available is suitable for such statistical treatment.

Implications: The findings of the review will be used to inform the development of a novel trauma resilience building programme for Defence Forces Ireland personnel prior to deployment on United Nations peacekeeping and humanitarian missions. It is also envisaged that the programme will be applicable to emergency services personnel, e.g. An Garda Siochana who currently have officers serving with the UN

15:30 - 17:00

## The precise threshold of blunted cardiovascular reactivity: A systematic review

A. O' Riordan<sup>1</sup>, S. Gallagher<sup>1</sup>, S. Howard<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Recent research from the stress and cardiovascular reactivity literature has shown that lower or 'Blunted' cardiovascular responses to be associated with adverse behavioural and physical/mental health. However, while blunted cardiovascular reactivity to stress is damaging to health, the precise point at which it does so is unknown. Therefore, the current systematic review and meta-analysis aims to establish the threshold of an atypical psychophysiological response which is considered blunted.

**Methods:** An electronic database search will be conducted via PubMed, Medline, Psych info and Web of Science databases. Search terms for each database will include 'Blunted' and 'cardiovascular reactivity'. The mean blunted response across studies will be weighted and combined to yield an average blunted cardiovascular response for systolic blood pressure (SBP), diastolic blood pressure (DBP) and heart rate (HR).

**Expected Results:** It is expected that the systematic review will yield a threshold of cardiovascular reactivity for DBP, SBP and HR which are considered blunted and damaging for health.

**Current stage of work:** The systematic review is currently being conducted.

**Discussion:** The results will yield the precise threshold of cardiovascular reactivity which is considered blunted, and is associated with adverse health outcomes. This will provide future research with a reference to identify psychosocial factors which are damaging to health.

15:30 - 17:00

## The associations between the personality traits of openness to experience and cardiovascular stress responsivity.

A. Soye<sup>1</sup>, P. Ó Súilleabháin<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

Accumulating research has investigated the role of openness within the context of cardiovascular wellbeing. Greater cardiovascular reactivity implies an excessive physiological response which is likely to contribute to negative health outcomes. Research suggests persons higher in openness are distinguished by an adaptive cardiovascular stress response when met with changing stressors. Most previous studies have focused on the influences of active stressors that elicit cardiovascular reactions characterized by beta-adrenergic activation. Considerably less research has been conducted on passive stressors which are considered to be more atherosclerotic than active stressors. The present study aims to further research by assessing openness and cardiovascular responsivity across a protocol of both active and passive stressors. The study consists of four phases; a 20minute acclimatization period, an active stress exposure, inter-task rest period and a passive stress exposure, throughout which continuous cardiovascular response data will be collected using a Finometer. Openness will be measured using the NEO Five Factor Inventory (McCrae & Costa, 2010). 74 female undergraduate students between 18-25years will participate in the study. A 4x1 ANCOVA will assess cardiovascular reactivity during the four phases on the study. The study is presently in the data collection stage, however it is expected that there will be a distinction between the cardiovascular stress responses to active and passive stressor. This study will add to the accumulating research on protective health implications of openness. It will also be the first to examine cardiovascular adaption across active and passive acute stress exposures.

15:30 - 17:00

## Theory-based development of an experimental paradigm to examine the influence of coping on stress

A. Schäfer<sup>1</sup>, F. Pels<sup>1</sup>, J. Kleinert<sup>1</sup>

<sup>1</sup>German Sport University Cologne, Germany

The objective of this study is to develop an experimental paradigm to investigate the influence of different coping strategies on stress. As previous studies indicate, focus on positive strategies (e.g., acceptance) can be expected to decrease stress, whereas evasive coping strategies (e.g., denial) can be expected to increase stress.

Assuming a moderate effect ( $\eta^2 = 0.06$ ) and a power of .80, the sample will comprise 55 physical education (PE) students. In a randomised-controlled design, participants will be distributed into four experimental groups and one control group (independent variable: coping; dependent variable: stress reaction). Initially, stress will be induced by means of a cover story stating that the aim of the study is to assess an individual's eligibility to become a PE teacher through two tasks. Subsequently, one of four coping strategies will be manipulated within the four experimental groups (focus on positive: participants reflect their benefits from the tasks; support coping: participants think about persons who could help; active coping: participants make a plan for handling the tasks; evasive coping: participants reflect their emotions). There will be no manipulation of coping within the control group. Stress will be measured psychologically (Visual Analogue Scale, Multidimensional Mood State Questionnaire) and physiologically (heart rate variability). Data will be analysed by ANOVA.

The experimental design is currently being tested in a pilot study. The results will be helpful to design coping interventions aimed at preventing chronic stress and related negative health outcomes (e.g., depression, cardiovascular diseases).



# Self-management, medication adherence, & chronic illness

15:30 - 17:00

Joseph Chilcot

15:30 - 17:00

## Examining adherence to anticoagulant and antiarrhythmic medication in patients with atrial fibrillation (AF)

E.C. Taylor<sup>1</sup>, M. O'Neill<sup>1</sup>, L.D. Hughes<sup>1</sup>, P. Bennett<sup>1</sup>, R. Moss-Morris<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom

**Background:** Medication non-adherence leads to adverse clinical outcomes in patients with atrial fibrillation (AF), prescribed anticoagulants to reduce stroke-risk and antiarrhythmics to alleviate symptoms (i.e. heart palpitations). Beliefs about medicines, depression and drug attitudes predict medication non-adherence in cardiovascular patients but have not been examined in AF. Beliefs about antiarrhythmics and anticoagulants may differ as antiarrhythmics alleviate immediate 'concrete' symptoms, whereas anticoagulants reduce long-term threats (i.e. stroke). We hypothesise; 1) beliefs about medicines (lower necessity/higher concerns) and negative attitudes are positively associated with non-adherence to anticoagulants, but not antiarrhythmics; 2) depression is associated with non-adherence; 3) beliefs about medicines, negative attitudes and depression independently predict non-adherence to anticoagulants, but not antiarrhythmics.

**Methods:** This cross-sectional study is part of a larger longitudinal study. AF patients (n=187) were recruited from clinics and online. Participants completed two versions of the Beliefs about Medicines Questionnaire, Drug Attitude Inventory and Morisky Medication Adherence Scale, related to anticoagulants and antiarrhythmics, and the Patient Health Questionnaire-8. Correlation and regression analyses were conducted.

**Findings:** Results indicated 1) greater concerns and more negative attitudes were associated with anticoagulant non-adherence, but not antiarrhythmic non-adherence; 2) depression was not associated with adherence; 3) concerns independently predicted anticoagulant non-adherence.

**Discussion:** It is important to examine medication-type when examining non-adherence in AF patients as medication beliefs may differ; Concerns predicted adherence to anticoagulants but did not significantly predict antiarrhythmic non-adherence, which may be driven by other factors (i.e. symptom severity). Mood was not associated with adherence in AF patients.

15:30 - 17:00

## Psychosocial predictors of non-adherence to tamoxifen in breast cancer survivors: A longitudinal analysis

Z. Moon<sup>1</sup>, R. Moss-Morris<sup>1</sup>, M. Hunter<sup>1</sup>, L. Hughes<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom

**Background:** Up to 50% of breast cancer survivors prescribed tamoxifen do not take it as recommended, which is associated with poor clinical outcomes. This study aimed to assess changes in non-adherence rates over time, and to identify clinical, demographic and psychosocial factors associated with changes in non-adherence, using the Common Sense Model and the Theory of Planned Behaviour as a framework.

**Methods:** 345 breast cancer survivors who were in their first year of tamoxifen prescription were sent four questionnaires over a 12-month period. Questionnaires assessed demographic and clinical factors, side effects, illness perceptions, medication beliefs, social support, distress and adherence. Adherence was assessed using the Medication Adherence Rating Scale. Latent Growth Modelling was used to identify predictors of non-adherence.

**Findings:** Reported rates of non-adherence increased over time (37-48%). Unintentional non-adherence (35-43%) was reported more frequently than intentional non-adherence (7-10%) at baseline and 12 months. Several predictors of non-adherence were identified, the most consistent were: being from minority ethnic groups; having lower necessity/concern differentials; and lower perceived behavioural control over medication taking (all  $p < .05$ ). Unintentional non-adherence was associated more strongly with clinical and demographic factors, whereas intentional non-adherence was associated more with psychosocial factors.

**Discussion:** Reported rates of non-adherence to tamoxifen rise over time, with unintentional non-adherence being reported more frequently than intentional. These results identified demographic and clinical variables which can be used to identify women at risk of non-adherence, and modifiable psychosocial variables which can be targeted in psychological interventions to improve adherence in this population.

15:30 - 17:00

## Influence of Sickle-cell disease representation on compliance: orientations for health intervention.

D. Oudin<sup>1,2</sup>, M. Gay<sup>1</sup>, M. Lehougre<sup>2</sup>, F. Galactéros<sup>2</sup>

<sup>1</sup>Université Paris Nanterre, France

<sup>2</sup>Teaching Hospital Henri Mondor, France

**Background:** Sickle-cell disease (SCD) is a genetic disorder that affects hemoglobin with symptomatic systemic consequences and extreme pain seizures. Despite an improvement in care, non-compliance remains important: between 31 and 73%. 25 to 30% of patients are hospitalized annually.

In a previous study, we showed a link between representation of SCD (in the sense of Leventhal) and compliance or adherence but on a small sample.

**Aim:** Replicate the previous study on a larger population to provide guidance to patient.

**Method:**

**Population:**

211 adultes recruited in a specialized unit of Teaching Hospital Henri Mondor (France).

**Psychometrics:**

1. SCD representation: Illness Perception Questionnaire Revised (IPQ-R) ;
2. Compliance: Morisky Medication Adherence Scale (MMAS) ;
3. Adherence: Beliefs about Medication Questionnaire (BMQ).

**Finding:**

IPQ-R factor analysis shows two factors:

F1: "Patient adaptation": including Coherence, Control treatment, Personal control and Chronology;

F2: "Negative experience": including Cyclicity, Consequences, Emotional Representation and Identity.

Bootstrap model is valid ( $F(207) = 14.22$ ;  $p < .0001$ ) and explains 17% of the variance of compliance.

It includes direct effects of F1 ( $b = 0.17$ ), F2 ( $b = -0.24$ ) and adherence ( $b = 0.23$ ) on compliance. And direct effects on adherence of F1 ( $b = 0.13$ ) and F2 ( $b = -0.22$ ). Only one indirect effect on compliance appeared ( $b = 0.03$ ).

**Discussion:** F2: "Negative experience" decreases beliefs and cognitions about drugs and behaviors of follow-up of medical prescriptions, contrary to F1 "Patient adaptation". Guidance to patient should focus on adaptative factors to reduce influence of negative or false representations.

15:30 - 17:00

## Symptom appraisal of potential lung cancer symptoms in people with Chronic Obstructive Pulmonary Disease

K. Robb<sup>1</sup>, Y. Cunningham<sup>1</sup>, J. Waller<sup>2</sup>, S. Macdonald<sup>1</sup>, U. Macleod<sup>3</sup>, S. Harrow<sup>4</sup>, S. Wyke<sup>1</sup>, K. Whitaker<sup>5</sup>

<sup>1</sup>University of Glasgow, United Kingdom

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<sup>5</sup>University of Surrey, United Kingdom

**Background:** For people with Chronic Obstructive Pulmonary Disease (COPD), incidence of lung cancer is four times higher than those without COPD. Promoting a shorter time to presentation is considered one key strategy for achieving earlier diagnosis of lung cancer and improving survival. The aim of the study was to explore how the experience of COPD influences symptom appraisal and help-seeking for potential lung cancer symptoms.

**Methods:** Qualitative interviews were conducted with men (n=17) and women (n=23) aged 40-83 with a diagnosis of COPD. Topic guides drew on the Integrated Symptom-Response Framework and asked about experience and interpretation, action, symptom recognition and help-seeking, evaluation and re-evaluation. Framework Analysis was used to interpret the data.

**Findings:** Participants tended to attribute all their (chest) symptoms to their COPD, and it did not occur to them that a change in symptoms could have a cause other than COPD. Most participants talked about how friends/family would notice a change in their symptoms and encourage help-seeking. However, others felt their COPD isolated them due to lack of mobility, fatigue, perceived disgust and embarrassment. Participants tended to visit health professionals frequently however there was a lack of awareness of their increased risk of lung cancer.

**Conclusions:** People with Chronic Obstructive Pulmonary Disease (COPD) tended to attribute all symptoms to their COPD and were unaware that they were at increased risk of lung cancer. Family and friends could notice changes in symptoms however some participants reported social isolation.

15:30 - 17:00

## Body change stress, illness perception and benefit finding as predictors of distress among cancer patients

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<sup>1</sup>Stellenbosch University, South Africa

<sup>2</sup>Freie Universität Berlin, Germany

**Background:** We sought to determine the extent to which body change stress, illness perception and benefit finding were predictors of psychological distress among women receiving treatment for breast cancer at a public hospital in Cape Town, South Africa. We hypothesised that these variables would significantly predict psychological distress.

**Methods:** We conducted a cross-sectional study using a convenience sample of 201 women receiving treatment for breast cancer at a tertiary hospital in South Africa. We administered a battery of measures including the revised Centre for Epidemiologic Studies Depression Scale, the Brief Illness Perceptions Questionnaire, Breast Impact of Treatment Scale and the Benefit Finding scale. We conducted multiple regression analysis with psychological distress as the outcome variable and illness perception and benefit finding as the predictor variables.

**Findings:** 37% of our sample reported clinically significant levels of distress. The linear combination of the predictors explained 41% of the variance in psychological distress. We found that illness perceptions and body change stress were significant predictors or symptoms of depression, but benefit finding was not.

**Discussion:** Patients' appraisal of their illness and their concerns regarding changes to their body accounted for considerable psychological distress. This finding brings into focus the possibility of assisting patients to manage their distress through more adaptive cognitive appraisal of their illness and effective ways of appraising the changes in their body image.

15:30 - 17:00

## Illness representations and health behavior of coronary heart patients and patients diagnosed with colorectal cancer

S. Teleki<sup>1</sup>, M. Káplár<sup>1</sup>, K. Csókási<sup>1</sup>, A. Huszár<sup>1</sup>, E.C. Kiss<sup>1</sup>

<sup>1</sup>University of Pécs, Hungary

**Background:** Numerous studies have demonstrated that illness representations play a crucial role in the illness adaptation process. Influencing the beliefs, attitudes and expectations of the person, these representations might have a significant influence on the health behavior of the patients. The aim of the study is to explore the possible differences in illness representations (IR) between patients with coronary heart disease (CHD) and (healed) patients with colorectal cancer (CRC) and to examine the associations between IR and lifestyle factors of the patients, especially alcohol consumption and smoking.

**Methods:** In this cross-sectional study, 151 patients with CHD (mean age = 62.07, 68.2% male) and 28 patients diagnosed with CRC (mean age = 64.0, 53.6% male) filled out the Revised Illness Perception Questionnaire (IPQ-R; Moss-Morris et al., 2002), whereas both alcohol consumption and smoking were measured with a single item.

**Findings:** Statistical analysis revealed that CRC patients expected more serious consequences, more chronic timeline, and perceived more symptoms related to their illness than CHD patients. CHD patients, however, reported more concerns and more negative emotional response. Concerning CRC patients, illness coherence negatively associated with alcohol consumption, whereas, consequences, concerns and emotional response showed positive associations with smoking. In the case of CHD patients, more serious consequences were related to lower alcohol consumption.

**Conclusion.** Providing disease-specific information to the patients and helping them create a coherent model of their illness might be as important part of their treatment as teaching useful and adaptive techniques to cope with negative emotions.

# Attitudes & personality in relation to older adults' health

15:30 - 17:00

Jasminka Despot Lucanin



15:30 - 17:00

## Medicalization of old age and attitudes towards the elderly people

E. Probierz<sup>1</sup>, A. Galuszka<sup>2</sup>

<sup>1</sup>University of Silesia, Poland

<sup>2</sup>University of Silesia in Katowice, Poland

The understanding of social and cultural phenomena in medical terms is the simplest definition of medicalization. Old age ceases to be perceived as a natural process and becomes a medical phenomenon, a disease, a pathology. Pharmaceutical concerns and medical lobbies are among the causes of this phenomenon. However, more important in the development of medicalization is the significant role played by the individualization of society.

As it is shown by the latest research, attitudes towards death, old age or elderly people may contribute to the reception of medicalized phenomena. Whether our attitude towards old age is neutral or not, it is related to many views on, for example, placing relatives in centers for elderly people or postponing the moment of retirement.

However, the phenomenon of medicalization is mainly analyzed theoretically. From available sources, this is the first study combining attitudes towards older people with a perception and attitudes towards the medicalization of old age.

In addition, the study includes socio-demographic variables and personal experiences of the respondents.

The main aim of the research is to show by selected methods of statistical analyzes that the appearance of specific attitudes towards the elders is related to the greater acceptance of the medicalization of old age.

This phenomenon may be confirmed in numerous works in the field of sociology regarding the individualization and secularization of society. The study also takes up an important problem from the point of view of statistics indicating an ageing population.

15:30 - 17:00

## An investigation of the relationship between health literacy and influenza vaccination among older adults.

L. Burke<sup>1</sup>, C. Dwyer<sup>1,2</sup>, B. McGuire<sup>1,2</sup>

<sup>1</sup>School of Psychology, NUI Galway, Ireland

<sup>2</sup>Centre for Pain Research, Ireland

**Background:** The study aims to examine the association between health literacy (HL) and influenza vaccination among adults aged  $\geq 50$  years, following recommendations from the National Immunisation Advisory Committee that all adults of this age should receive the vaccine. It also aims to determine if any observed relationship is mediated by beliefs and/or knowledge and moderated by critical thinking disposition (CTD).

**Methods:** A non-experimental, cross-sectional design is used. Data is being collected from a healthy, community-based sample aged  $\geq 50$  years using online and offline questionnaires. A target of 153 participants must be recruited to detect a small effect size. HL is measured as a predictor, past receipt and future intentions to receive the influenza vaccination as outcomes, knowledge and beliefs (drawn from the Theory of Planned Behaviour and the Health Belief Model) as potential mediators, and CTD as a potential moderator. Correlations, and if appropriate, mediation and moderation, will be tested using a combination of Pearson's correlations and logistic regression analyses.

**Expected results:** Based on past research, it is expected that HL and influenza vaccination will be significantly associated, and that beliefs and knowledge will partially explain the relationship, while CTD will have a moderating effect on the association.

**Current stage of work:** Data collection is currently underway.

**Discussion:** The study will address a gap in current literature and add to the body of knowledge surrounding HL and healthcare decision-making. It may also flag a potential area for health promotion interventions to target with a view to increasing immunisation.

15:30 - 17:00

## Examining the moderating effect of conscientiousness on the relationship between prospective memory and medication adherence.

J. Flynn<sup>1</sup>, C. Noone<sup>1</sup>, E. Morrissey<sup>1</sup>, K. Bennett<sup>2</sup>, C. Cahir<sup>2</sup>, G. Molloy<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway., Ireland

<sup>2</sup>Royal College of Surgeons in Ireland, Ireland

**Background:** Prospective memory (PM) refers to the formation, retention and execution of future intentions (Sheppard et al, 2016). PM positively correlates with levels of medication adherence with small-medium effect sizes (Zogg et al, 2012). Consequently, age-related declines in PM have been shown reduce adherence levels (Hayes et al, 2009). Higher trait conscientiousness is associated with increased levels of medication adherence (Molloy et al, 2014) and could therefore compensate for the effects of low PM on adherence levels. This study intends to investigate this.

**Methods:** This research will use an existing dataset from the Irish Longitudinal Study on Aging (TILDA). The medication possession ratio (MPR) of hypertensive participants will be calculated and categorised as adherent (MPR>80%) or non-adherent (MPR<80%). A logistic regression using the MPR categorisation as an outcome variable will be conducted using PM and other relevant covariates as predictor variables. A linear regression with a continuous MPR as the outcome variable will also be conducted. A moderated multiple regression using a PM x conscientiousness interaction term will also be conducted.

**Expected Results:** It is expected that PM will positively correlate with medication adherence and that conscientiousness will moderate this relationship whereby participants low in PM but high in conscientiousness will exhibit higher adherence rates than participants low in PM and conscientiousness.

**Current Stage of Work:** We are currently preparing to conduct the analysis.

**Discussion:** This research has the potential to highlight the effects of PM on medication adherence and the role personality could play in regulating these effects.

15:30 - 17:00

## Why does the protective effect of optimism for maintaining mental health decreases in older age?

C. Salewski<sup>1</sup>, M. Vollmann<sup>1</sup>

<sup>1</sup>University of Hagen, Germany

**Background:** Previous research has shown that the protective effect of optimism against emotional disturbance seems to diminish in older age. Wrosch et al. (2017) suggested that this effect results from the decreasing effectiveness of problem solving, a coping strategy typically used by optimists, in older age. In the present study, this assumption was tested with regard to depression and well-being.

**Method:** In a cross-sectional study, 266 participants (67% female, M age = 61 years, range 40 - 94 years) filled in questionnaires measuring dispositional optimism, problem solving coping, depressed mood, and well-being. Data were analyzed using moderated mediations.

**Findings:** The analyses revealed that the effect of optimism on both depressive mood and well-being is moderated by age (interaction effects:  $b = 0.02$  and  $-0.01$ ,  $p < .05$ ). However, age did not moderate the effect of problem solving on both outcomes, and also the moderated mediation indices turned out to be non-significant.

**Conclusion:** As expected, the protective effect of optimism decreased with increasing age. Contrary to the assumptions, this effect cannot be explained by changes in the effectiveness of problem solving as a coping strategy. Future research should consider the role of situation-specific coping strategies and as well the appropriateness of the operationalization of dispositional optimism in older age.

# Psychological practice in health settings

15:30 - 17:00

Kate Hamilton-West

15:30 - 17:00

## Implementing lifestyle interventions in clinical practice within mental health services can be challenging

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**Background:** Research has traditionally been associated with generating new knowledge, which can be translated into treatment guidelines, new potential treatments and eventually into clinical practice. A body of evidence has emerged demonstrating the efficacy of a range of behavior change and lifestyle interventions across disorders and associated risk factors. However, translating these interventions into clinical practice has been challenging, often requiring additional resources and strategies. At times, poorly understood moderators of treatment response may have impacted on the adoptability and sustainability of interventions within services. This presentation examines the current research into lifestyle interventions being undertaken by researchers affiliated with the Centre for Brain and Mental Health Research, highlighting some of the challenges in translating research outcomes into clinical practice within Mental Health Services.

**Methods:** A mixture of completed and ongoing local lifestyle intervention studies undertaken during the past six years will be reviewed (e.g., smokers with psychotic disorders; youth experiencing depression; mental health clinicians' attitudes towards physical health interventions). Key findings will be highlighted, focusing on mode of treatment engagement and delivery, and potential implementation strategies across different populations and settings.

**Findings:** While lifestyle intervention studies show good short-term health outcomes for clients with mental illness which is encouraging, these interventions are often not adopted by services outside the initial research studies and may require additional resources to facilitate successful uptake and implementation.

**Discussion:** This presentation will address challenges facing mental health services in conducting translational research, and discuss strategies in implementing and sustaining interventions beyond the research phase.

15:30 - 17:00

## Preliminary examination of cognitive-behavioral cancer stress management group implementation in clinical care

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**Background:** Cognitive-behavioral cancer stress management (CBCSM) groups have been shown in randomized controlled trials to promote post-traumatic growth and self-efficacy and improve psychosocial and physiological functioning among cancer survivors. The next step in translational science is to test CBCSM in the clinical practice setting, moving from efficacy to effectiveness trials. The aim of the present study is to examine the effectiveness of CBCSM for promoting resiliency when implemented in the cancer care setting.

**Methods:** We are funded to recruit 100 adult cancer survivors for CBCSM group intervention and 100 matched treatment-as-usual control participants who are referred by oncology, currently undergoing or within 1 year of cancer treatment, with predicted survival > 1 year. Modeled after efficacy trials, CBCSM is delivered as a 5-session group intervention promoting cognitive and behavioral coping strategies to manage stress. Linear regression analyses will test pre- to post-intervention changes in resiliency measures (e.g., PROMIS measures of post-traumatic growth, self-efficacy) for intervention vs. control participants.

**Expected results:** Preliminary results suggest initial acceptability and feasibility for stakeholders. In examining effectiveness, we hypothesize that CBCSM participants will report greater improvements in resiliency measures compared to control participants.

**Current stage of work:** We have enrolled 17 patients to CBCSM group thus far and plan to complete enrollment within approximately 1 year. Thus, we expect to provide preliminary effectiveness results in August 2018.

**Discussion:** This translational trial examines real-world acceptability, feasibility, and effectiveness of CBCSM in a large clinical practice setting and increases patient access to evidence-based interventions in clinical care.

15:30 - 17:00

## Development and evaluation of a long-term conditions training programme for primary care mental health workers

K. Hamilton-West<sup>1</sup>, A. Bates<sup>1</sup>, S. Hotham<sup>1</sup>, P. Wilson<sup>1</sup>

<sup>1</sup>University of Kent, United Kingdom

**Background:** Training mental health workers to support people with long-term conditions (LTCs) could help to address significant unmet psychological needs in this population. We worked with health commissioners in the UK to develop, deliver and evaluate a brief interactive training programme.

**Methods:** Sixty primary care mental health workers attended a two-day workshop covering key facts (informed by a review of relevant research), opportunity to engage with the 'lived experience' of people with LTCs (e.g. via videos and role plays) and skills-based training (in specific assessment and intervention methods). Training was underpinned by psychology theory, including the Common Sense Model (Leventhal et al., 1980) and Social Cognitive Theory (Bandura, 1977). Participants completed measures of knowledge, understanding and confidence (self-efficacy) before and after training.

**Findings:** Participants reported limited knowledge, understanding and confidence at baseline, underlining the need for training. Knowledge of LTCs improved significantly following training ( $p < .0001$ ), along with awareness of the impact of poor psychological wellbeing on physical health ( $p < .05$ ) and the role of psychological therapies in supporting people with LTCs ( $p < .0001$ ). Self-efficacy also improved ( $p < .001$ ). Qualitative feedback indicated that participants particularly valued training in therapeutic approaches, including Acceptance and Commitment Therapy and Motivational Interviewing.

**Discussion:** Mental health workers' knowledge, understanding and confidence in providing effective support to patients with LTCs can be significantly improved via a brief training programme underpinned by psychology theory. Further research is needed to examine impacts of training on practice and patient outcomes. An online version of the LTCs training programme is available at <http://www.trainingltcs.org.uk/>



15:30 - 17:00

## Increasing patient expectations about acupuncture treatment: an online experiment.

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**Background:** Patients' expectations about treatment effects can have a profound influence on the treatment outcome. Higher expectations often predict better outcomes. The aim of this experimental study was to investigate, whether information can change expectations about treatment benefits in patients with pain.

**Methods:** In this web experiment, subjects were randomized to two types of information: In the high expectation group the participants were told that acupuncture leads to a substantial decrease in symptoms in about 50% of cases. In the regular expectation group the participants were told, that about half of the patients get better, but the specific effect of acupuncture is still unclear. Information was presented as text and video. The persuasiveness was assessed via manipulation check and the Expectation for Treatment Scale (ETS) was the primary outcome.

**Findings:** Of 215 subjects 74 patients with pain (78.4% females, mean age 49.7 years) met the criteria and were included in the analysis. Expectation (ETS) after the information increased in the high expectation group from 2.39 (CI 2.15-2.64) to 2.57 (CI 2.32-2.82) and decreased in the regular expectation group from 2.32 (CI 2.11-2.54) to 2.20 (CI 1.97-2.43) ( $p = 0.033$ ) even though no significant difference in the manipulation check was found ( $p = 0.409$ ).

**Discussion:** The current findings indicate that expectations towards a specific medical treatment can be changed through audiovisual information in patients with pain. Increasing expectations within medical consultations might contribute to better treatment effects.

# Health communication

15:30 - 17:00

Delyth James

15:30 - 17:00

## Co-development with health professionals: an online communication training resource

D. Bradbury<sup>1</sup>, P. Watson<sup>1</sup>, L. Porcellato<sup>1</sup>, H. Timpson<sup>1</sup>, G. Turner<sup>1</sup>, A. Chisholm<sup>2</sup>, R. Young<sup>3</sup>, S. Goodhew<sup>3</sup>, N. Isaac<sup>4</sup>

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<sup>4</sup>Cornerstone Practice, United Kingdom

**Background:** Rates of unhealthy weight, (both over and under-weight) in young children are increasing, although the factors that cause child weight issues are largely preventable. As parents play an important role in children's weight-related behaviours, good communication between parents and health professions is essential. However many health professionals feel uncomfortable, unable or ill-equipped to raise weight issues with parents.

**Aim:** This study aims to co-develop a training tool for multi-agency professionals to equip them with the confidence, knowledge and skills to promote healthy weight in pre-school age children.

**Methods:** Four participatory development workshops were held with a multi-agency development group (health visitors, nursery nurses, children's centre staff, public health practitioners, GPs, academics). Initial meetings involved identifying key components and problem-solving activities to inform a draft of an online intervention. The intervention draft was then reviewed by the development group and further developments discussed during a fourth meeting.

**Findings:** An online training tool and behaviour change intervention based on Self-Determination Theory (SDT) was developed to reflect the views of the multi-disciplinary development group. Bespoke modules were developed to address emerging training needs such as understanding culture, roles and responsibilities, and key behaviour change techniques. Practitioners expressed a preference for messages to be relevant, practical and focussed, i.e. provide key points rather than a bombardment of information.

**Discussion:** Despite initial anxieties about engaging professionals in the development workshops, there was good attendance and engagement throughout the co-development process. Co-production is a feasible methodology for bringing together multi-disciplinary professionals in intervention development.

15:30 - 17:00

## Patient engagement and communication behaviours around prompt urinary catheter removal: a prospective theory-based correlational study

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<sup>4</sup>The Newcastle upon Tyne Hospitals NHS Foundation Trust, United Kingdom

<sup>5</sup>Ottawa Hospital Research Institute, Canada

**Background:** Reducing catheter-associated urinary tract infections (CAUTIs) takes priority in the worldwide drive to reduce hospital-acquired infections. Prolonged catheter duration increases risk of bacterial-colonisation (day-by-day), associated with higher risk of CAUTIs. Early postoperative catheter removal can effectively reduce CAUTIs, but current median-duration of UK postoperative catheterisation (3-days) remains higher than the recommended one day standard (CDC-guidelines). A theory-based approach to understanding predictors of patient communication behaviours may facilitate prompt catheter removal and reduce CAUTI incidence.

**Methods:** A prospective-correlational study involving hospitalised patients from 14 medical/surgical wards in the North-East England, UK. Adult patients (n=140) requiring short-term catheterisation ( $\leq 14$ days) completed predictive questionnaires at baseline (post-insertion) and follow-up (post-removal). A Theoretical Domain Framework (TDF) questionnaire first explored the breadth of potential patient behaviour determinants, and secondly informed the theory-selection. We then mapped TDF domains to Social Cognitive Theory (SCT), social support and habit constructs, to identify predictors of patient intention and behaviour.

**Findings:** With 95% response-rate, SCT constructs self-efficacy (MEAN=3.77,SD=1.42) outcome expectations (MEAN=4.44,SD=1.45) and social support (MEAN=3.91,SD=2.01) accounted for a medium amount of variance in patients' intention (MEAN=4.21,SD=2.38,  $R^2_{adj} = 0.23$ ) and with addition of habit (MEAN=4.09, SD=1.93) accounted for small amount of variance in prediction of patients' communication behaviour (MEAN=1.01,SD=1.43, $R^2_{adj} = 0.03$ ) engaging with healthcare-professionals.

**Discussion:** Findings showed, patients had the intention to engage with HCPs to advocate timely catheter removal. However, low variance in behaviour showed that patient's intentions do not translate into actions. Future interventions targeting self-efficacy could encourage patients to prompt HCPs for early catheter removal leading to fewer CAUTIs.

15:30 - 17:00

## Interventions to increase adherence to medication amongst individuals with low health literacy: A systematic review

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<sup>1</sup>Cardiff Metropolitan University, United Kingdom

<sup>2</sup>Cwm Taf University Health Board, United Kingdom

**Background:** Low Health Literacy (LHL) can have a negative effect on overall health. One 'health behaviour' affected by LHL is medication adherence. The aim of this review was to identify the effective components of interventions targeting medication adherence in low health literate populations.

**Methods:** A database search of Embase, Medline, PsychINFO, CINAHL, Scopus and the Cochrane Library from the start of each database was conducted. Studies published in peer reviewed journals were included if they involved an intervention to increase adherence to medication in LHL populations and were written in English. Studies were excluded if they did not report randomised controlled trials or measure Health Literacy or Medication Adherence (MA).

**Findings:** The review identified 3283 potential titles; seven studies were included in the final review. All seven studies comprised multi-faceted interventions. Two studies were found to be effective, with one reducing unintentional medication non-adherence, the other reducing intentional non-adherence. Three further studies were found to be partially effective. Four of the five effective or partially effective studies used visual aids such as icons or pictograms. No studies mentioned theory relating to behaviour change; however, all studies included characteristics, which could be mapped onto Behaviour Change Techniques (BCTs).

**Discussion:** Multi-faceted interventions designed to improve medication adherence among low health literate populations can be effective, particularly when pictorial image matching is applied. Further methodologically robust, theoretically based interventions with effective longitudinal follow-up are required to develop an evidence-based approach to support adherence to medication in this group of patients.

15:30 - 17:00

## Exploring cardiomyopathy diagnoses: the clinicians' perspective

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<sup>2</sup>Physical Activity Exchange, Research Institute for Sport and Exercise Sciences, Liverpool John Moore's University, United Kingdom

**Background:** Cardiomyopathies are characterised by structural and functional abnormalities of the heart muscle, and are the leading cause of sudden cardiac death in under 35 year olds. A diagnosis of cardiomyopathy can have a profound and ongoing psychological impact on patients. Clinicians play a pivotal role in providing information and support following diagnosis. The aim of this study was to explore clinicians' experiences of the diagnosis process in cardiomyopathy care.

**Methods:** Qualitative semi-structured interviews were undertaken with five consultant cardiologists. Data was transcribed verbatim and analysed using interpretative phenomenological analysis.

**Preliminary Findings:** An overarching theme of "clinician-patient interaction" was identified. This highlighted the importance of the interaction and the impact it had on patients' well-being. Sub-themes included: 'the importance of language', where patients' and clinicians' understanding of relevant terminology often diverged; 'time to communicate' which highlighted the challenges of caring for patients in a time restricted environment; and 'learning to trust', where the variations in care pathways experienced by patients prior to their diagnosis, resulted in tensions between clinicians and patients.

**Conclusion:** Clinician-patient interaction was perceived as challenging. The use of language, particularly the clinical labels assigned to cardiomyopathy, may provoke further distress and confusion in patients if not properly explained. This may be further confounded by time restrictions and varied care pathways leading up to diagnosis.

15:30 - 17:00

## Living with age-related macular degeneration: a qualitative study of consultations at diagnosis

T. Pendeke<sup>1</sup>, R. Shaw<sup>1</sup>, H. Bartlett<sup>1</sup>

<sup>1</sup>Aston University, United Kingdom

**Objective:** To explore patients' and clinicians' perceptions and experiences of age related macular degeneration (AMD) consultations at diagnosis including the treatment and decision-making process.

**Design:** A qualitative design was used involving stakeholders throughout.

**Methods:** Participants included a small homogeneous group of AMD patients (n=6), and clinicians included ophthalmologists (n=2) and, nurses (n=2). Consultations were observed and audio-recorded, followed by semi-structured interviews. Transcribed data were analysed using Langdrige's critical narrative analysis to attend to individuals' experiences and perceptions of information provision at diagnosis.

**Results:** Three dimensions captured and represented the experiences and positioning of participants within the clinician-patient dyad at diagnosis; "the interpersonal dimension", "linguistic dimension" and "structural dimension". Across the dimensions, patients and clinicians highlighted barriers/enablers to understanding diagnosis and treatments. Fear of losing sight and "the clinician said it" principle were drivers for consenting to treatment, rather than understanding of benefits and side effects.

**Conclusions:** Involving stakeholders and using critical narrative analysis facilitated an understanding of the diagnostic consultation and treatment decision-making which foregrounded patients' and clinicians' experiences. We drew on Habermas' theory of communicative action to recommend broadening the content within consultations and shifting the focus to patients' life contexts. Multifaceted interventions for information provision, including teach back, and accessible information materials may enable the creation of an environment that supports genuine patient involvement, better understanding of diagnosis, treatment, and fostering participatory decision-making. Furthermore, clinicians may benefit from training programmes designed to improve their relational skills to optimize relationships with patients and understanding of communicated information at diagnosis.

15:30 - 17:00

## Reversing social gradient: Impact of patients' communication with their practitioners on adherence to preventive behaviours

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<sup>1</sup>University of Luxembourg, Research Unit INSIDE, IRSEI, Luxembourg

<sup>2</sup>Ligue Luxembourgeoise d'Hygiène Mentale, Service Information Prévention, Luxembourg

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<sup>4</sup>University of Luxembourg, IRSEI, Luxembourg

A good communication with a physician has positive effects on the patients' adopting preventive behaviours. Knowing social inequalities in health, we aimed at analysing in what extent financial situation influences the associations between quality of communication and improved secondary preventive behaviours and limited risk factors - in cardiovascular diseases: hypertension, overweight, obesity, hypercholesterolemia, diabetes.

Methods: 1,289 patients who underwent a coronary angiography in Luxembourg completed a self-administered questionnaire in 2008/09 and 2013/14. The association between improving each preventive eating behaviour (decrease of salt, sugar, fat consumption; increase of fruits/vegetables) and the quality of physician-patient communication (5-items scale) was evaluated using logistic regression models. Perceived financial situation (difficult, easy, and very easy) was introduced in interaction with the communication score.

Findings: Patients declared in a difficult or easy financial situation had a higher probability of decreasing their salt intake when physician-patient communication quality was higher (OR [95% CI] respectively: 1.139 [1.045; 1.240], 1.105 [1.032; 1.182]). The pattern was similar for increased consumption of fruits/vegetables in patients with hypertension, diabetes, overweight and hypercholesterolemia. Reduced sugar consumption was associated with communication quality in hypercholesterolemia patients in financial difficulty (OR [95% CI]: 1.095 [1.009; 1.189]).

Discussion: The quality of communication has a higher impact on adopting healthy behaviours in patients declaring themselves in financial difficulty. These findings raise awareness on the importance, in patients with perceived financial difficulties, of physician-patient quality to improve adherence to the secondary preventive recommendations. Across the lifespan, it highlights the role of physicians in reversing their patients' social gradient.



17:00 - 18:00

## Increasing the impact of behaviour change intervention research: Is there a role for patient and public involvement?

Molly Byrne

Professor of Health Psychology, Health Behaviour Change Research Group and the School of Psychology, National University of Ireland, Galway, Ireland



There is powerful evidence that changing people's health-related behaviour can impact the leading causes of mortality and morbidity. However, despite the significant potential to improve health and clinical outcomes, behaviour change interventions frequently fall short of expected reach or impact.

Patient and public involvement (PPI), where patients and members of the public are actively involved in the activities, organisation and governance of research, has been proposed as a strategy to improve the quality, reach and impact of research. Using PPI across the whole research process can make it more likely that behaviour change interventions are relevant to users' needs, better designed, more likely to be implemented and, ultimately, more effective.

In this talk, Molly will introduce the key concepts of PPI and critically evaluate the current evidence for PPI as a strategy to improve research quality and impact.

Molly will present a selection of studies, all with a strong PPI component, conducted within the Health Behaviour Change Research Group at NUI Galway. These include a research prioritisation project which sought the views of people with diabetes, services providers and policy makers to identify research priorities in behavioural diabetes research. In another study, Molly and her team used consensus methods to identify a core outcome set for young adults with Type 1 Diabetes. In another study (the D1Now Study), a 'young adult panel' of young adults with diabetes joined the research team to develop an intervention to promote self-management and better outcomes among this population.

Finally, Molly will reflect on the experience of using these strategies, outline lessons learned and offer guidance for future attempts to embed PPI within behaviour change intervention research.

Thursday, 23 Aug

# SYMPOSIUM: Challenging the qual/quant divide: Combining methods in health psychology research

9:00 - 10:30

O'Flaherty

Olivier Luminet

9:15 - 9:30

## 'Its like living with a ghost': Experiences of intimate partners of people living with depression

M. Dempsey<sup>1</sup>, N. Willis<sup>1</sup>, R. Murphy<sup>1</sup>

<sup>1</sup>UCC, Ireland

**Objective:** While depression pivots to a large degree on intrapersonal issues, it does so within the context of a number of interpersonal systems including partner, family, friends. Research on partners perspectives on depression is limited – we do not yet know how long term partners understand a process that they experience second hand? In exploring how partners of people coping with depression experience and understand depression, this study advances existing knowledge of the lived experience of depression.

**Method:** An embedded design with phased collection of qualitative and quantitative data was used. In the initial phase 12 participants completed a brief demographic questionnaire and took part in semi structured individual interviews. Data were analysed using thematic analysis (TA). This data set acted as a support system for the second data set which was collected by means of a 71 item four-part online survey. Partners experiences of depression was measured using feedback from facial expressions.

**Results:** Findings highlight that intimate partners come to know and understand depression through negotiation of everyday tasks, behaviours and interactions. Depression is experienced as both contributing to, and detracting from, intimacy in a relationship.

**Conclusion:** Depression, a complex multifaceted issue, can be viewed through individual, familial, and societal lenses. When positioned within the context of an intimate relationship, depression is a challenging interpersonal experience which can facilitate personal growth and development and enhance relationship resilience.

9:30 - 9:45

## Different factors underlying food choices for varying levels of nutritional involvement: a mixed model study.

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Nutrition information labelling and nutrition/health claims are a few of the aids to help consumers make appropriate judgments about food and its healthiness. However, it is unclear how good consumers are at processing such information, and if it influences their food choice. Nutritional involvement, a specific type of motivation, may play a key role in determining food choices. The first aim of this study is to assess how consumers make conscious food choices, and if these are influenced by the level of nutritional involvement. A second aim of this study is to find out if, when, and how consumers with varying levels of nutritional involvement use nutrition labelling and nutrition/health claims to make food choices.

A mixed-methods design was chosen to answer these research questions, in which the quantitative phase allowed for purposeful sampling for the qualitative phase. Firstly, 156 people were recruited and assessed on two nutrition-related involvement scales. Secondly, from these participants, 25 extreme-scoring individuals were invited for qualitative interviews which focused on dietary habits, food choice as well as use and understanding of labels.

All participants, regardless of their level of involvement, felt labels were essential but also needed numerous improvements, e.g. regarding the sizing and use of scientific language. Additionally, some interesting differences were found for the different levels of involvement with regards to the use of nutrition labels, and what aspects of the label is considered. The implications of this study are interesting for health psychology, but also consumer psychology and marketing.

9:45 - 10:00

## Anticipating the challenges of taking a pluralistic approach to qualitative data in the study of experiences of chronic illness and welfare policies

W. Day<sup>1</sup>, D. Shepperd<sup>1</sup>, R. Shaw<sup>1</sup>

<sup>1</sup>Aston University, United Kingdom

This paper explores the potential challenges of applying pluralistic, or “dual focus”, methodologies to qualitative data, data which focuses on the experiences of younger adults’ living with chronic invisible illnesses within the wider contexts of the UK’s post-2008 welfare reforms. Drawing upon work completed as part of an ongoing PhD project, we explore the anticipated difficulties of utilising both phenomenological and Foucauldian-inspired discursive approaches with future data sets. Considering the epistemologically ‘mismatched’ assumptions of these approaches, we seek to explain how achieving a pragmatic balance between establishing epistemological commitments, against accusations of methodolatry, becomes necessary. Through the writings of Ricœur, Foucault, Heidegger, Habermas and Carla Willig, we argue that experience pre-exists discourses but that discourse, most readily experienced through language, mediates how these experiences can be spoken of. Genealogical examinations of socially constructed knowledge around “welfare claimants”, allow us to illustrate how discourses may intersect and constrain individuals’ experiences of ill-health. We contemplate the practicalities of applying methodologies ‘simultaneously’ to data sets: Langdrige’s Critical Narrative Analysis is proposed as a potential method for incorporating both through the hermeneutics of empathy (phenomenology) and suspicion (discourse analysis). Anticipating the outcomes of the project, we hope to see how a pluralistic approach may enable more holistic understandings of chronic illnesses through reconceptualisations and reconstructions of social knowledge. These outcomes are considered in terms of material consequences (such as taxation and unemployment rates) as well as the necessities required to enact genuine policy reforms.

10:00 - 10:15

## From mixing methods to logic(s) of inquiry: revisiting mixed design studies in health psychology

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<sup>2</sup>Centre for Counselling & Psychotherapy Education (CCPE), London, United Kingdom

<sup>3</sup>University of Lancaster, United Kingdom

This paper offers a worked example mixed methods research in health psychology. We propose the adoption of the Model of Disciplined Inquiry as a procedure for making decisions about research design based on the questions asked in the research as opposed to any predilections of the researchers. This model opens up opportunities for flexibility by drawing on multiple paradigmatic assumptions, which fit the research question, if indeed that is appropriate. Decisions about a suitable strategy for the research can then be made. We propose three logics of inquiry to help articulate the processes involved in making sense of findings and their relationship to theory. To help demonstrate the Model of Disciplined Inquiry in action, we provide a worked example to illustrate the decision-making process when developing a mixed design research study. The example comes from our own empirical work in retirement villages for older adults in the UK. The research design involved a number of complementary methods in order to answer a range of research questions about the quality of life of those living in retirement villages. We argue for a move away from the focus on the types of data generated (i.e. qualitative or quantitative) and relatedly a move away from mixed methods research to mixed design research. We conclude the paper with some challenges experienced in the worked example and some challenges yet to be resolved.

# SYMPOSIUM: A NZ and UK perspective of health psychology: Uniting training, research, practice and policy

9:00 - 10:30

D'Arcy Thomson

Marie Johnston



9:00 - 9:15

## TRAINING Health Psychologists to Improve Scotland's Health: Tracking progress

V. Swanson<sup>1</sup>, H. Dale<sup>2</sup>

<sup>1</sup>University of Stirling, United Kingdom

<sup>2</sup>University of St Andrews, United Kingdom

**Background:** The National Health Service (NHS) in Scotland struggles to improve population health. Health inequalities, obesity, and multi-morbidity, underpinned by unhealthy behaviours, present major challenges. Applying health psychology to health improvement in practice can have large-scale impact, but it is difficult to establish professional roles for health psychologists in health service structures. We discuss development and impact of a practitioner training programme for health psychologists in the NHS in Scotland, focusing on development, process and quality improvement issues.

**Methods:** We describe a 10 year quantitative and qualitative evaluation of process and outcomes of health psychology training in the NHS. Processes include ensuring consistency in curriculum delivery, training across diverse contexts, delivery of effective supervision, and trainee support. Outcomes include project impact, dissemination and sustainability.

**Findings:** The programme has included 11 of 14 area health boards in Scotland, recruiting over 35 trainees. Impacts have been significant, including many peer reviewed papers, presentations, local dissemination and reports. Most completers were employed in health service-related posts, or academic/practitioner roles. Maintaining support for trainees and supervisors has been challenging. In response, a tutoring system and more comprehensive support structures for trainees and supervisors have been trialled and evaluated positively. Sustainability of posts and funding is challenging.

**Discussion:** This ground-breaking programme has expanded health psychology practice in Scotland, but needs to evolve to demonstrate cost-effectiveness and continue to evidence benefit for health improvement in the context of a 'fire-fighting' health service

9:15 - 9:30

## HEALTH Psychology in practice and training: University-based Health and Cancer Psychology Services in New Zealand:

M. Berrett<sup>1</sup>, S. Joice<sup>1</sup>

<sup>1</sup>Massey University, New Zealand

**Background:** Since 2007, Massey University-based Health and Cancer Psychology Services, have assisted thousands of people across the life span with a range of physical health conditions. Funded by the local Health Board, the services are staffed by both clinical and health psychologists and employ indigenous (Maori) psychologists to work with Tangata Whenua. Service psychologists, informed by health psychology, aim to reduce distress and promote self-management for those with long term health conditions through individual consultation and collaboration with local health services. Monitoring of service outcomes, training and research opportunities are also provided for clinical and registered intern psychologists.

**Methods:** The implementation of a client database provides access to service statistics indicating delivery patterns and service outcomes which is used to inform funding, strategic direction, and research projects. Using both quantitative and qualitative service data, we describe our current service including the demographic, range of health conditions, and nature of the therapies offered.

**Findings:** From 2007 to 2017, more than 5,700 people were referred and 36,500 sessions delivered: 49% for cancer; 34% for adult health and 17% for child health. Across all health conditions, 63% of clients referred were female and 13% were Maori. Therapies delivered include Acceptance and Commitment Therapy, Cognitive Behavioural Therapy, Motivational Interviewing, and Solution Focused Therapy.

**Discussion:** The university-based services have proved to be a successful model of healthcare delivery allowing development of strong health-community based relationships; delivery of evidence-based therapy; implementation of “practice-based” research; and provision of practical training experience for clinical and health psychology interns.

9:30 - 9:45

## ACCEPTABILITY and feasibility of delivering a behaviour change techniques training programme for diabetes health professionals

W. Maltinsky<sup>1</sup>, V. Swanson<sup>2,3</sup>

<sup>1</sup>University of the Highlands and Islands, United Kingdom

<sup>2</sup>University of Stirling, United Kingdom

<sup>3</sup>NHS Education for Scotland, United Kingdom

**Background:** Evidence-based behaviour change techniques (BCTs) can be instrumental in changing individual behaviour. Health practitioners require suitable training to build their understanding of BCTs and to develop competence in their use. This paper describes a health psychology-informed programme providing 'Motivation, Action and Prompting' BCT skills training to diabetes health professionals based on the Health Behaviour Change Competence Framework.

**Methods:** Health psychologists delivered 1.5 days of training over 2 sessions, augmented by manual and homework activities. The programme included 10 core techniques to support translating intentions into behaviour, including goal setting, action planning, problem solving and prompting/cueing. Professionals (n=152), recruited via diabetes networks from 9/14 Scottish Health Boards participated in 15 groups. A subset completed follow-up data. A mixed-method evaluation, using the Kirkpatrick model, measured reaction to training, knowledge development and behavioural change using Training Acceptability Rating scales (TARS), BCT use and action plan enactments.

**Results:** TARS rating of training was positive. Participants reported improved knowledge, understanding skills and confidence as well as a greater expectation to use BCT skills. 91% of eligible participants (n=86) completed action and coping plans to use a BCT in their practice. Half of these (38, 48%) replied to a 6-week follow up email with most (32, 84%) reporting that they had achieved or partially achieved goal enactment.

**Discussion:** Delivery of training programmes based on behaviour change theory can support health professionals in the use of BCTs. Despite high acceptability, feasibility is influenced by challenges in information distribution, and mixed response to implementation at follow-up.

9:45 - 10:00

## HEALTH psychology-informed practice promotes research: exploring peer support groups for those with long-term health conditions

S. Joice<sup>1</sup>, M. Berrett<sup>1</sup>

<sup>1</sup>Massey University, New Zealand

**Background:** The Chronic Care Model and the notion of the Expert Patient (both underpinned by Bandura's Social Cognitive Theory) are currently being used to shape the primary healthcare service for people with long term health conditions. This paper reports a study requested by the local health board to review the opportunities for the individual to self-manage within the local community through peer lead support noting the barriers and facilitators to running such groups.

**Methods:** Support group leaders in a demographic region were identified, interviewed individually and asked to complete an online survey describing their groups.

**Findings:** Of the 55 support group leaders identified and interviewed; 35 completed the survey. The interviews revealed that most leaders were paid workers (60%) with remainder being volunteers. Group meetings were convened on a weekly or 2 monthly basis, covering a range of health conditions and generally people (60%) refer themselves with very few being referred by health professionals (1%). The three key aims of the groups were to offer support, provide a social outlet and an opportunity to share experiences. Leaders experienced a "paternalistic" attitude from health professionals who declined to refer patients to the groups because they were not "professionals" and there were implications for confidentiality.

**Discussion:** By applying health psychology models as part of health service provision also provides a template for further investigation. Support groups aims, their perceived role in promoting self-management and health professional's perceptions of support groups can be explained by health psychology models.

**SYMPOSIUM: Social relationships and  
health across the illness trajectory:  
Challenges of harnessing social support  
for health**

9:00 - 10:30

Anderson

Ann-Marie Creaven & Tracey A. Revenson

9:00 - 9:15

## Evaluating the impact of social group membership on physical activity using national ParkRun data

A. Creaven<sup>1</sup>, S. Howard<sup>1</sup>, A. O'Donnell<sup>1</sup>, G. McMahon<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Limerick, Ireland

**Background:** Social identity theory proposes that the groups to which a person belongs can exert significant influences on health behaviours such as physical activity, in part through social support derived from group membership. To test the hypothesis that group affiliation promotes physical activity maintenance, we use data from ParkRun participants in Ireland who participated in the weekly 5k walk/run for the first time during the first three weeks of January 2017.

**Methods:** Based on ParkRunner affiliations, we categorized participants as having no affiliation, a competitive affiliation (e.g., triathlon club), or non-competitive affiliation (e.g., recreational or weight-loss focused).

**Results:** The majority of first-timers (N = 3,490) were women (60.3%); the modal age group was 35-39 years. Men and women were equally likely to affiliate with a group, with women slightly more likely to affiliate with a non-competitive group, and men with a competitive (e.g., triathlon) group ( $\chi^2 = 14.11, p < .001$ ). Repeated measures analyses demonstrate that the pattern of first-time ParkRunners was comparable for group members and non-group members, with increased first-time participation during the second and third weeks of the year. Contrary to our hypothesis, there were no differences in total number of runs completed over the 10-week period assessed, according to group membership ( $F = 1.10, p = .38$ ).

**Findings:** The results suggest that group membership is not associated with maintenance of physical activity as measured by ParkRun participation, over the period assessed. The implications of harnessing group social support for health behaviour maintenance are discussed.

9:15 - 9:30

## How does participation within online support communities empower spinal cord injury patients?

N. Coulson<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

**Background:** Spinal cord injuries (SCIs) affect approximately 500,000 people worldwide and present many physical and psychosocial challenges. Social support has been identified as helpful in improving psychosocial outcomes though the majority of research to date has focused on the role of face-to-face social networks. The aim of this study was to identify the various ways through which engagement with an online support community may empower individuals living with a SCI.

**Methods:** A deductive thematic analysis of 100 conversation threads (N=1589 messages generated by 419 unique members) randomly selected from a spinal cord online support community (dated from July 2001 to August 2017).

**Findings:** Using a modified coding framework developed by van Uden-Kraan et al., (2008), it was possible to identify several distinct ways in which interaction between members of an online support community may empower individuals living with SCI. These included: 'exchanging information and helping others', 'provision of emotional and esteem support', 'finding recognition and understanding', 'sharing experiences', 'discussing sensitive topics' and 'chit-chat'.

**Discussion:** The results of the analysis suggest that there exists a range of empowering processes which can result in participants having greater knowledge and mastery of their condition, making more informed choices and having active participation in relation to condition management. Online support communities can provide an accessible means through which SCI patients can access the experiential support from similar others.

9:30 - 9:45

## Social support and hindrance for completing web-based pain coping skills training: Expectations, reality, and implications

C. Rini<sup>1,2</sup>, L. Porter<sup>3</sup>, T. Somers<sup>4</sup>, F. Keefe<sup>4</sup>

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<sup>2</sup>Georgetown University School of Medicine, United States

<sup>3</sup>Duke University Medical Center, United States

<sup>4</sup>Duke University, United States

**Background:** Health benefits of behavioral interventions often depend on their ability to promote behavior change. Little is known about how participants' social context is associated with behavior change and self-efficacy (a mechanism underlying behavior change) in interventions. We investigated these associations among people with osteoarthritis completing web-based pain coping skills training (PCST).

**Methods:** 58 adults with symptomatic hip/knee osteoarthritis completed an 8-session web-based PCST program over 10 weeks. Pre-intervention, they completed a measure of expected intervention social support and hindrance (significant other behaviors facilitating or hindering intervention completion). Post-intervention, they reported received intervention support and hindrance. Married/partnered (n=37) participants reported on support/hindrane from their partner. Unmarried/unpartnered (n=21) participants reported on a main confidant. We investigated whether expected and received support and hindrance were associated with how regularly participants used pain coping skills during the intervention (assessed in the 8th program session) and pre- to post-intervention change in self-efficacy for managing pain.

**Findings:** Participants expected and received more support than hindrance (ps<.001). Expectations were largely confirmed: Participants who expected greater support received it (p<.001) and those who expected greater hindrance received it (p<.05). Yet, participants received less support and more hindrance than expected (ps<.05-.001). Greater received hindrance was associated with less regular skill use (p<.05). Expecting and receiving greater support predicted greater increases in self-efficacy (ps<.05). Expecting and receiving greater hindrance predicted greater decreases in self-efficacy (p<.05).

**Discussion:** Developing methods to improve support and reduce hindrance in the social context of behavioral interventions may offer a way to optimize intervention efficacy.



9:45 - 10:00

## Pain, catastrophizing, and caregiver support in people living with spinal cord injury

E. Stephenson<sup>1</sup>, M. Lam<sup>1</sup>, S. Cadell<sup>2</sup>, A. DeLongis<sup>1</sup>

<sup>1</sup>University of British Columbia, Canada

<sup>2</sup>University of Waterloo, Canada

**Background:** Studies have shown that higher levels of pain are associated with increases in catastrophizing, which in turn are associated with increases in subsequent pain. However, less is known about the social contextual factors, such as social support, which might influence this reciprocal relationship.

**Methods:** In a daily diary study of people living with a spinal cord injury (N = 74), we investigated the role of support from a care provider in moderating the reciprocal relationship between pain and catastrophizing. Telephone interviews were conducted twice daily for five days to assess between-person differences and within-person changes in pain, catastrophizing, and caregiver support.

**Findings:** At the between-person level, participants who tended to report high levels of pain were found to engage in more catastrophizing, especially if they tended to receive poor quality support ( $b = 0.44, p < .001$ ). At the within-person level, catastrophizing in response to within-person increases in pain was found to be more likely on days with high quality support compared to low quality support ( $b = .14, p < .05$ ). However, caregiver support was not found to moderate the relationship between catastrophizing and subsequent pain.

**Discussion:** Our findings suggest that caregiver support plays a role in the tendency to catastrophize both for those with high levels of pain and on days characterized by relative increases in pain. This provides support for a model of coping with pain in which coping responses depend on the social context.

10:00 - 10:15

## Social support and caregiver health: Exploring the role of stress appraisals

S. Gallagher<sup>1</sup>, E. Slattery<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Despite substantial research on the impact of caregiving on health, little explores the role of social support for caregivers themselves. Drawing on the cognitive appraisal model of stress (Lazarus & Folkman, 1984), this study evaluates stress appraisals as one mechanism by which social support may be protective for health in a sample of caregivers caring for children with disabilities. It was hypothesized that the associations between social support and both depression and benefit finding would be mediated by stress appraisals.

**Methods:** Parents caring for children with disabilities (N = 150) completed a cross-sectional survey assessing socio-demographics, social support, cognitive stress appraisal, depression and benefit finding.

**Findings:** As expected, the association between social support and benefit finding was mediated by cognitive stress appraisal, such that parents who reported higher social support tended to report more positive reappraisals and lower depression ( $R^2 = 30\%$ ,  $p < .001$ ). A similar pattern was evident for benefit finding, with greater support associated with better appraisals and higher benefit finding ( $R^2 = 21\%$ ,  $p < .001$ ).

**Discussion:** This is the first study to test whether social support operates through cognitive stress appraisals in family caregivers of children with disabilities. The findings will be discussed in relation to both the health implications for caregivers, and the challenges in enhancing social support for this group.

# SYMPOSIUM: Disparities in pain care: Psychosocial accounts and implications for practice and policy

9:00 - 10:30

Dillon

Sónia Bernardes

9:00 - 9:15

## Disparities in provider and lay expectations for pain treatment

R. Tait<sup>1</sup>

<sup>1</sup>Saint Louis University, United States

**Background:** There is substantial evidence supporting the importance of expectations for treatment that are both appropriate and shared by patients and providers if optimal outcomes are to be realized in the treatment of chronic pain patients. Similarly, inappropriate expectations can militate against the effective patient-provider collaboration that is required to achieve such outcomes. This presentation will show data reflecting substantial differences in patient and provider expectations for pain care.

**Methods:** Data will be presented from three studies, each of which systematically varied clinical characteristics of a hypothetical Low-back pain patient, employing web-based survey methodologies in which respondents were asked to imagine that they were treating physicians making clinical decisions. Studies #1 and #2 were between-subject designs which varied levels of pain severity and supporting medical evidence; respondents were drawn from a medical residency and the lay public, respectively. Study #3, involving medical students and the lay public, was a within-subjects design in which judgments were made for patients with increasing levels of pain severity and varying levels of medical evidence.

**Findings:** The data show that not only do large differences exist between naïve (i.e., lay public) and provider representations of how to assess and treat chronic pain conditions, but that those differences diverge increasingly as levels of pain severity increase.

**Discussion:** Implications are discussed for pain treatment and for public health initiatives that might better align patient and provider expectations for chronic pain care, as well as the need for further research that could facilitate such alignment.

9:15 - 9:30

## Contextualizing the effects of patient social status on nurses' pain assessment and management practices.

L. Campos<sup>1</sup>, T. Brandão<sup>1</sup>, L. De Ruddere<sup>2</sup>, L. Goubert<sup>2</sup>, S. Bernardes<sup>3</sup>

<sup>1</sup>ISCTE-IUL, Portugal

<sup>2</sup>Ghent University, Belgium

<sup>3</sup>ISCTE-Instituto Universitário de Lisboa, Portugal

**Background:** Epidemiological data shows that the lower one stands in the social hierarchy the higher the likelihood of carrying the burden of chronic pain. Recent studies suggest that social status disparities in access to quality pain care may account for these Findings: Our first goal was to further support such contention by investigating the effect of patient socioeconomic status (SES) on nurses' pain assessment and management practices (PAMP). Second, drawing upon the contextual model of gender biases in PAMP (Bernardes, 2012), we aimed to investigate the extent to which patient SES effect was modulated by clinical variables, e.g., patient distress and evidence of pathology (EP).

**Methods:** Female nurses participated in two experimental studies (study#1: n = 127; study#2: n =128) with a 2 (SES: low vs high) by 2 (EP: present vs absent/distress: low vs. high) between-subjects designs. After reading/visualizing a written vignette/video of a female low-back pain patient they were asked to report their PAMP.

**Findings:** Low SES patient's pain was assessed as less severe (study#1 and #2) and more attributed to psychological factors (study#2). The effect of patient SES on pain severity was only significant when EP was present (study#1). Low SES patient's pain was assessed as less credible but only when patient distress was high; and only the low SES patient pain credibility was influenced by levels of distress (study#2).

**Discussion:** Results support the contextual nature of social status biases in PAMP. Implications for clinical practice, health-care professional training and future research will be drawn.

9:30 - 9:45

## On the dehumanization of low social status pain patients: A qualitative study

S. Bernardes<sup>1</sup>, E. Diniz<sup>1</sup>, P. Castro<sup>1</sup>, A. Bousfield<sup>2</sup>, L. Campos<sup>1</sup>

<sup>1</sup>ISCTE-Instituto Universitário de Lisboa, Portugal

<sup>2</sup>Universidade Federal de Santa Catarina, Brazil

**Background:** Recent evidence suggests that low social status (SS) individuals are often dehumanized. Such dehumanization processes may play an important role in SS biases in pain care, but this contention lacks empirical support. Drawing upon the dual model of dehumanization (Haslam et al., 2014), this qualitative study explored whether nurses inferences of a pain patient SS were associated to (de)humanizing patient perceptions and recommended pain management strategies.

**Methods:** Female nurses (n=48) watched videos of two women (pretested as low vs. medium SS) with chronic pain performing a pain-inducing movement, with similar levels of pain behaviour. Afterwards, they were asked to freely associate characteristics/profession to patients and write down a story describing how pain was affecting patients daily-lives and recommend treatment. Similitude and content analysis were used.

**Findings:** Patient SS was recognized; low-SS patient was associated with low-SS professions (factory-worker); medium-SS patient with medium-SS professions (teacher). Medium-SS patient was portrayed with both uniquely human (autonomous) and human nature (communicative) traits and more described with positive prospects, agency and competence to self-manage pain. The low-SS patient was associated with human nature traits (hard-working) but denied uniquely human traits associated to competence; she was described as passive towards pain, without future prospects and more often referred to counselling.

**Discussion:** Findings suggest that dehumanization plays a role in SS biases in pain care, placing low-SS patients at increased risk for under-treatment. Implications for future research will be discussed as to clarify the causal relationship between dehumanization and SS biases in pain care.

9:45 - 10:00

## Using Virtual Humans to reduce pain treatment disparities: Patient- and provider-focused interventions

A. Hirsh<sup>1</sup>

<sup>1</sup>Indiana University - Purdue University Indianapolis, United States

**Background:** Safe and effective pain care remains a challenge, especially for racial/ethnic minority and low-income patients. Providers contribute to these disparities when their pain treatment decisions vary across patient groups. Interventions to address these provider factors have proven largely ineffective and/or impractical.

**Methods:** We completed a randomized controlled trial of a perspective-taking intervention that uses Virtual Patients to increase providers' knowledge of their pain treatment biases, enhance providers' empathy, and reduce providers' anxiety when interacting with diverse patients. Physicians completed a decision-making task assessing pain treatment biases for race (Black/White) and SES (low/high). Physicians who demonstrated a significant bias at Time 1 were randomized to the intervention or control group, and re-assessed 1 week later at Time 2.

**Findings:** 223 physicians (44% of total N=502) demonstrated a significant race and/or SES treatment bias at Time 1 ( $p < .05$ ). 60 physicians (27% of bias group N=223) demonstrated a significant race and/or treatment SES bias ( $p < .05$ ) at Time 2. Thus, 163 physicians who showed a treatment bias at Time 1 no longer showed this bias at Time 2.

**Discussion:** Preliminary results support the effectiveness of our intervention using Virtual Patients to reduce race and SES disparities in providers' pain treatment decisions. Similar effects were observed across the 3 bias categories (race-only, SES-only, race-x-SES). Future work is needed to examine the duration of these effects and how they translate to pain treatment of actual patients. Future work will also examine patient-centered interventions using Virtual Providers to improve pain outcomes for vulnerable patients.

# SYMPOSIUM: Women's health issues across the lifespan: Identifying risks and opportunities for change

11:00 - 12:30

Anderson

Efrat Neter



11:00 - 11:15

## HPV vaccination acceptability among Romanian young women

A. Baban<sup>1</sup>, M. Penta<sup>1</sup>

<sup>1</sup>Babes-Bolyai University, Romania

**Background:** In the current climate of insufficient vaccine coverage and increased vaccine hesitancy furthering our understanding of vaccine-related decisions is essential. This study aims to: (1) assess attitudes, knowledge and risk perceptions about HPV and the HPV vaccine; (2) identify the predictors of HPV vaccine acceptability; and (3) identify the most used sources of information about HPV vaccine.

**Methods:** We performed a cross-sectional study. An extension of the Health Belief Model provided the main theoretical framework. Four hundred and one women aged 18-26 completed the survey. The primary outcomes were intentions to vaccinate against HPV. We used descriptive statistics, bivariate correlations and hierarchical multiple regression to analyze data.

**Results:** Anticipated inaction regret ( $\beta=.38$ ,  $p <.001$ ), perceived vaccine safety ( $\beta=.22$ ,  $p <.001$ ), perceived susceptibility to HPV ( $\beta=.16$ ,  $p <.001$ ), previous vaccine refusal ( $\beta=-.15$ ,  $p <.001$ ), perceived vaccine effectiveness ( $\beta=.13$ ,  $p <.05$ ) and sexual history ( $\beta=-.09$ ,  $p <.05$ ) predicted HPV vaccine acceptability. Overall, the model accounted for 51% of the variability in intentions to vaccinate against HPV. The most often use sources for vaccine-related information reported by participants were: Internet / websites (43%) and doctors (39.7%). By far, the most trusted source for vaccine-related information was doctors (63.3%), followed by scientific papers (18%) and the Internet (8.5%). The data provide valuable insights into young women's vaccine-related knowledge, attitudes, and information-seeking practices.

**Conclusion:** Findings have practical implications for future communication campaigns aimed at enhancing HPV vaccine acceptance and offer potential targets for subsequent research.

11:15 - 11:30

## The difficult road to infertility treatment: Women's experiences of interacting with medical providers

I. Todorova<sup>1,2</sup>, Y. Panayotova<sup>1</sup>, T. Kotzeva<sup>3,4</sup>

<sup>1</sup>Health Psychology Research Center, Bulgaria

<sup>2</sup>Northeastern University, United States

<sup>3</sup>Burgas Free University, Bulgaria

<sup>4</sup>Institute for Population and Human Studies, Bulgarian Academy of Sciences, Bulgaria

**Background:** This paper aims to highlight how women pursuing infertility treatment through Assisted Reproductive Technologies (ART) in Bulgaria experience communications and relationships with medical providers during treatment. In Bulgaria most methods of assisted reproduction, including egg donation, are available and regulated, synchronized with EU legislation.

**Methods:** Data collected over several years include 27 in-depth interviews with women undergoing ART treatment, and texts from three online discussion forums 2007-2016. A total of 3215 on-line postings were selected from women involved with or considering ART procedures. Data were analysed through thematic analysis with a focus on language, informed by a discursive perspective.

**Findings:** We identify the following themes regarding interactions with infertility specialists: Interacting with providers as a partner and friend; as someone to be idolized for their expertise; as a metaphoric parent to the anticipated child; as insensitive and inaccessible; as unethical and profiteering.

**Discussion:** Some women were strongly critical during or after painful and unsuccessful attempts, others viewed ART experts the "glowing" terms which are in stark contrast to opinions in other reproductive healthcare contexts. Women hoped to develop non-hierarchical connections with providers; the metaphor of patients and providers as a "family" was implied by both sides. The current context of infertility treatment in Bulgaria integrates elements of medicalization and the medical model positioning women as passive, as well as collaborative model of communication and decision making between providers and patients. The findings are analysed in the context of the pronatalist expectations and motherhood mandate in the Bulgarian context.

11:30 - 11:45

### 3. Exercising in a commercial pregnancy-specific setting; Comparison to sedentary and long-exercising pregnant women

E. Neter<sup>1</sup>, G. Regev<sup>1</sup>, M. Bouskela<sup>1</sup>

<sup>1</sup>Ruppin Academic Center, Israel

**Background:** Health benefits of physical activity (PA) during pregnancy have been documented. Hence, most women are recommended to engage in PA during their pregnancy and pregnancy-targeted groups of PA have proliferated in recent years.

**Objective:** Compare levels of PA, attitudes towards PA and body image among pregnant women engaged in PA in pregnancy-specific setting, engaged in PA in regular settings and sedentary.

**Methods:** Online cross-sectional surveys were conducted among pregnancy women (n1=98; n2=120) recruited through social media and PA facilities. Independent variables were group status (pregnancy-specific PA setting, regular PA setting, sedentary) and background attributes; dependent variables were PA levels, stage in TTM, attitudes towards PA in pregnancy and body image.

**Findings:** Women exercising in pregnancy-specific setting reported less PA and earlier TTM location (M=3.15) than women exercising in regular setting (M=3.87), (t=1.80, p=0.04). There were no group differences in attitudes towards PA though there was significantly more variance in the PA attitudes of women in the pregnancy-specific setting, (F(1,54)=3.59, p > 0.05). Lastly, women in the pregnancy-specific setting reported a more positive body image than women in the other two groups and more comparison of their bodies to other pregnant women whereas women in the other two groups compared their bodies to non-pregnant women (t=2.89, p=0.003).

**Discussion:** PA is a new engagement to most women in pregnancy-specific setting, and women's attitudes towards PA are more ambivalent. This setting has the added benefit of higher body image enabled by the comparison to other pregnant women.

11:45 - 12:00

## Women's perceptions and parental practices as predictors of child energy expenditure behaviors and body mass

M. Boberska<sup>1</sup>, K. Horodyska<sup>1</sup>, M. Kruk<sup>1</sup>, K. Zarychta<sup>1</sup>, A. Luszczynska<sup>1</sup>

<sup>1</sup>University of Social Sciences and Humanities, Poland

**Background:** The study investigated associations between: (1) maternal perceptions of child body weight, (2) maternal practices aiming at child's energy expenditure, such as the use of restrictions of sedentary behaviors, stimulation to be active, and controlling energy expenditure, (3) child energy expenditure behaviors (screen sedentary behaviors, physical activity), and (4) BMI z-scores in children.

**Method:** Children (aged 5-11) and their mothers (N = 729 dyads at Time 1) participated in the study. At Time 2 ( 7-8 months follow-up), 495 dyads provided self-reported data. Children were 5-11 years old. Child and maternal body mass was assessed objectively with certified body weight scales (Time 1 and 2).

**Findings:** Path analysis indicated indirect effects of two maternal practices: (1) maternal stimulation to be active explained lower levels of child's BMI z-score (Time 2) (B = -.021, 95% BCI -.048; -.005), with higher levels of child's physical activity acting as the mediator; (2) higher maternal energy expenditure control explained higher BMI z-score levels in children (Time 2) (B = .008, 95% BCI .001; .026), with lower levels of child's physical activity acting as the mediator. These associations were found after controlling for parental socioeconomic status, child and maternal age, and child's BMI z-score at Time 1. There were no effects of maternal perceptions of child body weight on maternal practices.

**Discussion:** The findings have implications for childhood obesity as they highlight the contrasting effects of maternal practices on energy expenditure behaviors among children and, subsequently, body mass.

12:00 - 12:15

## Being very successful is important to her: Self-enhancement values among disadvantaged women following retirement

E. Gruszczynska<sup>1</sup>, A. Kroemeke<sup>1</sup>, N. Knoll<sup>2</sup>, R. Schwarzer<sup>2,3</sup>, L.M. Warner<sup>2,4</sup>

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<sup>4</sup>MSB Medical School Berlin, Germany

**Background:** The aim of the study was to examine well-being trajectories of adaptation to retirement in relation to individual and cultural differences, with a particular focus on gender. If the process is mainly driven by individual and gender-free resources, then people should be equally distributed between trajectories, regardless of gender. Over- or underrepresentation in terms of country or/and gender would weaken the assumption of the mainly individualistic character of this adaptation.

**Method:** The sample consisted of 596 retirees (330 German, 266 Polish, 59% female) assessed soon after retirement and then 3, 6, and 12 months later. Subjective well-being was evaluated with a multivariate approach that accounted for satisfaction with life, depression, and subjective health. Potential correlates of well-being trajectories were also examined (age, marital status, education, income and psychological resources, including Schwartz's personal values).

**Findings:** Latent class growth curve modelling revealed four trajectories per well-being domain. Following cross-tabulation, two groups that constantly had the best and worst well-being profiles were identified: one comprised mainly German men and another comprised mainly Polish women, who additionally reported the lowest socioeconomic and psychological resources. The main predictors of group membership were self-enhancement values (power and achievement, Exp (B) = 0.20,  $p < .05$ ), which were higher for the worst well-being group.

**Discussion:** Women disadvantaged in terms of psychological and socioeconomic resources strive for values, which are not likely to improve their individual well-being but are symbols of social position. Thus, these values may subjectively compensate for a lack of relevant resources.

# SYMPOSIUM: Longitudinal perspectives on close relationships and health – from microprocesses to macroprocesses

11:00 - 12:30

Dillon

Urte Scholz & Gertraud Stadler

11:00 - 11:15

## Predicting the provision of positive and negative health-related social control in dual-smoker couples

U. Scholz<sup>1</sup>, J. Lüscher<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

**Background:** Health-related social control aims at influencing and regulating another person's health behaviors. Positive control comprises strategies like discussing or reminding, negative control contains for example using pressure and inducing guilt. Health-related social control is common in romantic relationships. But very little is known about when and why positive and negative social control is provided.

**Methods:** A total of 85 dual-smoker couples reported daily on their provision of positive and negative smoking-specific social control, their own receipt of control, their belief that their control provision was helpful, their own and their partner's smoking behavior, their wish for their partner to quit, their positive and negative affect, their relationship quality and their provision of support during 10 days before and 21 days after their joint quit date.

**Findings:** Provision of positive social control was predicted by more receipt of positive, and less receipt of negative control, the belief that control was helpful and the wish for the partner to quit. Provision of negative control was related to receiving more negative and less positive control. Affect and relationship quality did not emerge as predictors. For male partners only own smoking was related to less, and partner smoking to more provision of both kinds of control.

**Conclusion:** Overall, the provision of both kinds of control seems to follow a certain reciprocity between partners. Perceived helpfulness of control was only relevant for the provision of positive control reflecting results on the receipt of positive and negative control on recipients' health behaviors.

11:15 - 11:30

## We had such a good time – or did we? On companionship, well-being, and health

G. Stadler<sup>1,2</sup>, J. Lüscher<sup>3</sup>, M.T. Riccio<sup>4</sup>, S. Ochsner<sup>3</sup>, N. Knoll<sup>5</sup>, R. Hornung<sup>3</sup>, U. Scholz<sup>3</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

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<sup>3</sup>University of Zurich, Switzerland

<sup>4</sup>New York University, United States

<sup>5</sup>Freie Universität Berlin, Germany

**Background:** Companionship is defined as social network members' participation in enjoyable shared activities. We investigate in this program of research how much partners in romantic couples agree on companionship and how their agreement and discrepancy relates to affect, relationship satisfaction, and health behaviour.

**Methods:** Both partners in committed romantic couples (Study 1: N = 90, Study 2: N = 99) filled out daily online diaries for over a month. We used a mean-difference approach to investigate companionship agreement and discrepancy.

**Findings:** The companionship items showed good reliability in both studies. We found in both studies that partners show considerable agreement and discrepancy in companionship that both contribute to explaining affect, relationship satisfaction, and health behaviour.

**Discussion:** A dyadic longitudinal approach to studying social processes such as companionship is useful for understanding important individual and relationship outcomes.



11:30 - 11:45

## Invisible, visible and no support from recent acquaintances impact the stress response in the lab

N. Bolger<sup>1</sup>, G. Stadler<sup>2</sup>

<sup>1</sup>Columbia University, United States

<sup>2</sup>University of Aberdeen, United Kingdom

**Background:** Health psychologists mostly focus on the positive effects of social support while a number of studies have found mixed effects, no effects, or even negative effects of social support. This study investigated how invisible, visible and no support from recent acquaintances impact negative affect and physiology in a lab setting.

**Methods:** Young women (N = 142) were invited to the lab session adapted from Bolger and Amarel's (2007) invisible support paradigm. Participants were fitted with blood pressure sensors, paired up with a female confederate, randomly assigned to visible emotional support, invisible emotional support, or no support before giving an unprepared evaluated speech.

**Findings:** From baseline to follow-up, participants in the control condition felt more negative affect than those in the invisible and visible support conditions,  $p = .021$  and  $p = .031$ . Motivational factors moderated this effect. Blood pressure did not differ between the experimental groups.

**Discussion:** This study adds to the evidence that support visibility can be manipulated in the lab and influences stress responses.

11:45 - 12:00

## Children's Unhealthy Eating and Body Fat Explained by Parental Pressure to Consume Food at Meals

A. Luszczynska<sup>1,2</sup>, K. Zarychta<sup>1</sup>, Z. Szczuka<sup>1</sup>, M. Kruk<sup>1</sup>, M. Boberska<sup>1</sup>, K. Horodyska<sup>1</sup>, A. Banik<sup>1</sup>

<sup>1</sup>SWPS University of Social Sciences and Humanities, Poland

<sup>2</sup>University of Colorado at Colorado Springs, United States

**Background:** Although parental nutrition strategies are frequently investigated, their effects are usually tested using a parental perspective only or a child perspective only. We tested if two parental strategies (pressure to eat and restriction of unhealthy foods) and children's perceptions of parental delivery of these strategies would predict fruit and vegetable intake, snack intake, hiding snacks from parents, and body fat in children.

**Methods:** Parent-child dyads (859 at T1) participated in a longitudinal study (the baseline, T1; 10-month follow-up, T2). Children were 6-11 years old (43.2% of boys). Nutrition behaviors were reported by children at T1 and T2. The use of parental strategies was reported by children and parents at T1. Bioimpedance method was applied to assess children's body fat.

**Findings:** Parental and child reports of higher pressure to consume food at meals at T1 (e.g., no dessert if the main course is not completed) predicted eating more snacks, frequent hiding snacks from parents, and higher body fat among children (T2). Fruit and vegetable intake was unrelated to parental strategies (neither parental nor children's reports). Parental and children's reports of restriction strategies were unrelated to children's nutrition and body fat.

**Discussion:** Both parental and child reports of pressure to eat counted and predicted nutrition and obesity outcomes. Parental pressure to consume food at meals is meant to assure that a children's diet is well-balanced and that food intake is well-scheduled. Yet, this strategy was counterproductive and enhanced children's snack intake, hiding energy-dense snacks from parents, and predicted higher body fat.

12:00 - 12:15

## Early family stress predicts divorce in stepfamilies: findings from a 20-year prospective study

A. DeLongis<sup>1</sup>, E. Stephenson<sup>1</sup>

<sup>1</sup>University of British Columbia, Canada

**Background:** Couples in stepfamilies are at increased risk of divorce and tend to experience high levels of stress. Cognitive models of stress predict that those who appraise stress as most serious are at greatest risk of poor outcomes. Social contextual models argue that spouses' shared appraisals might play a protective role.

**Methods:** We examined associations between appraisals of family stressor severity and subsequent divorce among 170 couples in stepfamilies. Each member of the couple was interviewed about stress, coping, and perceptions of their spouse. Couples were then followed, both with daily diaries and subsequent interviews, intermittently across 20 years.

**Results:** Family stress was associated with an increased risk of divorce. However, the risk was decreased when spouses reported a shared view of the seriousness of the stressor. Further, comparing data from both spouses indicated that when both reported the same problem as their most serious, the risk of marital dissolution was also decreased.

**Discussion:** Family stress was found to be a risk factor for divorce across a 20-year period. However, our findings support social-contextual and dyadic coping models in which shared appraisals of stress can serve a protective function. The findings support the value of early preventive interventions for couples in families under stress. Understanding how couples appraise the stressors they encounter may help identify useful targets for preventive marital interventions.

# SYMPOSIUM: Sex, gender and pain: a lifespan perspective

14:00 - 15:30

Room 201

Edmund Keogh

14:15 - 14:30

## Understanding the influence of gender on pain in the parent-child context

K. Boerner<sup>1</sup>, C. Chambers<sup>2,3</sup>

<sup>1</sup>BC Children's Hospital, Canada

<sup>2</sup>Dalhousie University, Canada

<sup>3</sup>IWK Health Centre, Canada

**Background:** Pain behaviours, experiences, and influences change over the course of development. A unique feature in understanding pain in pediatric populations is the important role that parents play in their children's pain experiences. Therefore, to understand the impact of sex and gender in pediatric pain the parental perspective must also be considered. This presentation will provide an overview of the research literature on sex and gender differences in pediatric pain with a focus on parental influences, and will describe a study examining the role of parent and child self-reported gender in the experience of pain, and parent's gendered beliefs about pain.

**Methods:** 168 parent-child dyads participated in a study where parents and children each completed self-reported questionnaires about their gender, and participated in the cold pressor pain task. Parents also completed a questionnaire about gender role expectations of children's pain.

**Findings:** Higher ratings of self-reported masculinity in fathers was related to higher pain tolerance and lower pain intensity during the pain task. Higher ratings of self-reported femininity in girls was related to greater parental proxy ratings of pain intensity during the pain task. However, self-reported masculinity and femininity were not related to pain outcomes in mothers or boys.

**Discussion:** Self-perceptions of gender appear to have a differential impact on pain based on sex in parents and children. A conceptual model of understanding sex and gender issues within the context of parental influences on children's pain will be discussed.

14:30 - 14:45

## Exploring gender-related beliefs about pain communication behaviours

E. Keogh<sup>1</sup>, K. Boerner<sup>2</sup>

<sup>1</sup>University of Bath, United Kingdom

<sup>2</sup>Dalhousie University, Canada

**Background:** Pain is subjective, and requires caregivers to accurately recognize the signals used to communicate pain. Beliefs about pain and pain coping can influence how such signals are interpreted. There are gender-based expectations about pain, although it is unclear whether this extends to how we communicate pain. This study examined whether there are gender-based beliefs around the verbal and nonverbal signals of pain, and if sex and pain status moderate such beliefs.

**Methods:** 453 adults (mean age = 35) completed an online survey. 283 (211 females) were not in regular pain, whereas 171 (131 females) reported persistent pain (>3 months). All rated the extent to which a series of common ways of expressing pain reflected typical male or female behaviours.

**Findings:** Overall, holding part of the body, moaning, crying and talking about pain were viewed as significantly more characteristic of typical females. Suppressing/hiding pain was more characteristic of typical males. No gender preference was found for grimacing or wincing. Sex differences were also found. Compared to males, females significantly rated holding the body and crying as more typical of females, whereas males rated suppressing/hiding pain as being more typical of males. Compared to those with persistent pain, those not in pain rated crying as more indicative of a typical female.

**Discussion:** Gender-based expectations exist for verbal and nonverbal pain expressions. The next step is to consider whether such expectations impact on how pain in others is appraised and responded to. If so, there may be implications for training and caregiving.

14:45 - 15:00

## A qualitative exploration of gender norms and stereotypes related to pain relief in Britain

S. Wratten<sup>1</sup>, E. Keogh<sup>1</sup>, C. Eccleston<sup>1</sup>

<sup>1</sup>University of Bath, United Kingdom

**Background:** Social norms influence a range of behaviours, but few studies have considered the social context in which pain occurs and how social factors such as gender may influence the use of pain relief. This study aimed to identify gender-related factors that influence the social acceptability of pain relief behaviours in men and women. It also considered the perceived consequences of norm violation.

**Methods:** Following a related Q-sort task, semi-structured interviews were conducted with twenty adult participants (50% female) about their perceptions of gender stereotypes surrounding pain relief, and the consequences of violating these perceived gender norms. Inductive thematic analysis was used to identify themes of factors influencing the social acceptability of a range of pain relief Methods:

**Findings:** Three overarching themes were identified: 'Gender norms in a pain context', 'Ungendered pain relief norms', and 'The sociocultural context of pain'. Exploration of these themes suggests that there are both gender and pain relief norms influencing social acceptability of pain behaviours, and that these norms are the product and producers of the social context in which pain occurs. In terms of social consequences, the risk of judgement by others emerged, with this judgement taking many forms.

**Discussion:** These findings provide a rich understanding of different forms of pain relief norms; those based on analgesic efficacy, and those based on gender norm conformity. This warrants consideration by healthcare and pain management practitioners, to help patients manage any gender-related barriers to achieving optimal pain relief.

# Quality of life and well-being in everyday life

9:00 - 10:30

Kirwan

Andrea Horn



9:00 - 9:15

## Couples coping with the transition to retirement: oral and written disclosure in daily life

A.B. Horn<sup>1</sup>, V. Rosenberger<sup>1</sup>, S. Holzgang<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

**Background:** Life transitions do not only challenge the individual's coping resources but also the social context. Disclosure as a coping strategy should not only improve intrapersonal wellbeing but also relationship quality as it is known to be a core process in the establishment of psychological intimacy. Written disclosure has been linked with improved interpersonal disclosure about stressors. This study aims at investigating daily disclosure in couples adjusting to the transition to retirement and its association with individual and dyadic wellbeing. Furthermore, it looks at changes of these associations after an expressive writing task.

**Methods:** In a couple-online study N= 51 couples with at least one recently retired partner answered over 14 days questions regarding disclosure to the partner at the end of the day, wellbeing, and psychological intimacy were additionally assessed in the morning. After the first week, participants were asked to write about their deepest thoughts and feelings regarding the new life situation.

**Findings:** Multilevel Actor Partner Interdependence models show that on days with more disclosure improved wellbeing and relationship quality is reported. This is particularly true for disclosure of positive content while sharing thoughts about the current transition to retirement did not show marked effects. Some of these positive associations seem to be more pronounced in the days after the writing task.

**Discussion:** The results underline the importance of interpersonal processes for the adjustment to life transitions. Particularly the sharing of positive experiences with the romantic partner is associated with positive changes in daily individual and dyadic wellbeing.

9:15 - 9:30

## Electronic media device use before bed and during sleep time: Lifespan perspective of Australian adults

S. Crebbin<sup>1,2</sup>, S. Titcumb<sup>2</sup>, J. Holloway<sup>2</sup>

<sup>1</sup>University of Melbourne, Australia

<sup>2</sup>Federation University, Australia

Sleep is essential for mental and physical health. Electronic media device (EMD) use has increased in the last decade, but little is known about sleep habits, patterns, and device use. This study investigated EMD use, two hours before bed and overnight, to explore relationships between EMD use, sleep quantity and quality, and mental health.

Australian participants (N = 229) completed online questionnaires: 75.5% female, age categories 18 – 24 years (28.8%), 25 – 34 years (19.2%), 35 – 44 years (20.5%), 45 – 54 years (20.1%) and 55 – 65 years (11.4%). Measures: Pittsburgh Sleep Quality Index, Sleep Hygiene Index, Depression, Anxiety and Stress Scale, EMD use. Analyses: gender, age groups, sleep (hygiene, quality, and quantity), mood, EMD use.

Sleep duration is similar to a decade ago; 91% of participants reported moderate-to-good sleep hygiene behaviours. However, almost two-thirds were classified as poor sleepers, also reporting symptoms of anxiety, depression, and stress. EMD use in the two hours before bed was high (97% > 30 minutes), 93% had devices in bedrooms, and 23% reported waking during the night and checking devices for at least 30 minutes. Interestingly, 36% of participants thought devices helped them get to sleep, but 34% thought they interfered with sleep, and 31% were not aware of night modes on phones.

Results highlight the importance of investigating clients' technology use pre-bedtime and overnight as it may be an important aspect of sleep habits underpinning well-being. Further investigation into the nature of EMD use is warranted (e.g., passive, social).

9:30 - 9:45

## First time blood donation: Investigating the differential impact on psychological well-being resulting from contrasting experiences

K. Greffin<sup>1</sup>

<sup>1</sup>Universität Greifswald, Germany

**Background:** Demographic changes and increasingly stringent criteria for blood donor exclusion are projected to lead to a reduction in the number of donors, while the demand for blood products continues to increase. Due to low retention rates following first donation, recruitment of new donors alone will not be adequate to maintain a donor pool sufficient to meet demand. This study aims to investigate the psychological impact of the experience of first presentation for donation, including the effect of donor rejection, which may negatively affect the donor retention rate

**Method:** 145 subjects presenting for their first donation were asked to fill out two questionnaires. All subjects completed the first questionnaire prior to the predonation assessment. Subjects who were subsequently rejected from donation (RFTD, n=33) were asked to complete the second questionnaire immediately, while those accepted for donation (FTD, n=112) were asked to answer the second questionnaire after their donation had been completed. The German version of the Multidimensional Mood State Questionnaire (MDMQ; Steyer et al., 1997) was used to measure the current psychological well-being along three dimensions.

**Results:** The experience of presenting for the first time for blood donation was found to affect mood (RFTD:  $F(1,30)=5.007$ ,  $p=.033$ ,  $\omega p^2=.111$ ; FTD:  $F(1,105)=12.665$ ,  $p=.001$ ,  $\omega p^2=.098$ ) and partly agitation (RFTD:  $F(1,30)=.358$ ,  $p=.554$ ,  $\omega p^2=.000$ ; FTD:  $F(1,105)=42.897$ ,  $p=.000$ ,  $\omega p^2=.281$ ), while vigilance was unaffected.

**Discussion:** Rejection from blood donation at first presentation appears to have a differential impact on a potential donor's psychological well-being. Health psychologists should explore interventions aimed at reducing negative impacts and improve donor retention.

9:45 - 10:00

## Using Ecological Momentary Assessment to study physical activity, screen-time and affect in adolescents

J. Blicher-Hansen<sup>1</sup>, D. Sheffield<sup>1</sup>, A. Cross<sup>1</sup>

<sup>1</sup>University of Derby, United Kingdom

**Background:** Many young people between 13–18 years do not meet recommended guidelines for physical activity (PA), or screen-based electronic media engagement (screen-time). However, the relation between affect and health behaviours in daily life is not well-understood. The study aimed to explore bi-directional relationships between PA, screen-time and affect in adolescents, using Ecological Momentary Assessment (EMA).

**Methods:** An EMA design was used to explore intra-individual variation. **Participants:** The sample comprised eight adolescents, each providing three observations per day for five consecutive days. **Measures and analysis:** PA and screen-time were measured objectively via approved smartphone apps, Moves® and Moment® respectively. Affect was reported on the International Positive Affect and Negative Affect Schedule – Short Form Parent-Child Version (PANAS-SF-PC; Watson, Clark, & Tellegen, 1988). Data were analysed using hierarchical multiple regression on complete-pooled data, controlling for between-participant variability using dummy-variables.

**Findings:** Analysis revealed PA and screen-time to predict overall positive affect; both making a unique contribution to the model (PA,  $\beta = .202$ ,  $p = .001$ ; screen-time,  $\beta = .171$ ,  $p = .007$ ). Time-lagged analysis revealed PA (not screen-time) as a predictor of subsequent positive affect ( $\beta = .157$ ,  $p = .043$ ). Statistically significant effects of PA and screen-time on negative affect, and affect on subsequent PA or screen-time were not revealed.

**Discussion:** Findings indicate that EMA, apps, and within-subject analyses are useful in understanding the dynamic relations between affect, PA and screen-time. These findings illustrate the importance of PA and screen-time in predicting variations in positive affect.

# Individual differences and health behavior

9:00 - 10:30

Larmor

Fuschia Sirois

9:00 - 9:15

## Time for a meta-analysis: The consideration of future consequences and health behaviour

L. Murphy<sup>1</sup>, S. Dockray<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

**Background:** The Consideration of Future Consequences scale (CFC) measures the extent to which an individual considers (and is guided by) the short- or long-term outcomes of present-day behaviour. There is empirical evidence for associations between CFC and a range of positive and negative health-related behaviours, and the utility of the measure in health psychology research is increasingly being recognised. However, the strength and direction of associations remain to be quantified. This research synthesis examined associations between the CFC scale and four categories of health-related behaviour and behavioural intention: (a) health risk; (b) health promotive; (c) intended health promotive; and (d) illness/injury preventative behaviour.

**Methods:** A systematic literature search was conducted to identify studies that measured the CFC and intended or actual engagement in any health-related behaviour. Effect sizes were synthesised using a random-effects model.

**Findings:** The aggregate effect sizes for each behaviour category were significant, albeit small in magnitude (ranging from  $-.186$  to  $.143$ ,  $p < .001$ ). CFC scale reliability and study quality score significantly moderated the overall association between CFC and health risk behaviour, with higher reliability coefficients and quality scores associated with larger effect sizes. Neither the length of CFC scale used, mean age, or the sex proportion of study samples significantly moderated overall effect sizes.

**Discussion:** The magnitude of effect sizes raises a number of methodological concerns in relation to CFC research in health psychology, and holds important theoretical and applied implications for the inclusion of the construct in future research and health behaviour change interventions.

9:15 - 9:30

## Dispositional compassion is associated with health behaviors

M. Hintsanen<sup>1</sup>, K. Gluschkoff<sup>2</sup>, L. Pulkki-Råback<sup>2</sup>, M. Elovainio<sup>2</sup>, A. Saarinen<sup>1,2</sup>, T. Tammelin<sup>3</sup>, M. Hirvensalo<sup>4</sup>, L. Keltikangas-Järvinen<sup>2</sup>, O. Raitakari<sup>5,6</sup>

<sup>1</sup>University of Oulu, Finland

<sup>2</sup>University of Helsinki, Finland

<sup>3</sup>LIKES Research Centre for Physical Activity and Health, Finland, Finland

<sup>4</sup>University of Jyväskylä, Finland

<sup>5</sup>Turku University Hospital, Finland

<sup>6</sup>University of Turku, Finland

**Background:** Despite dispositional compassions' documented importance for a range of health related outcomes, its role in predicting health behaviors remains unclear. This study examined the associations of dispositional compassion with physical activity, alcohol use, and smoking.

**Methods:** The participants (N=886-1308) were from the Finnish population-based Young Finns study. The mean age of the participants was 43.0 years in 2011. We collected self-reports of compassion in 1997 and 2011 and of health behaviors in 2001, 2007, and 2011. In addition, an objective pedometer measure of physical activity was collected in 2011. Cross-sectional and longitudinal associations between compassion and the health behavior outcomes were analyzed with linear and logistic regressions.

**Findings:** In cross-sectional analyses, compassion was associated with having never smoked (OR 1.59,  $p < 0.001$ ) and a reduced likelihood of at-risk alcohol use (OR 0.62,  $p < 0.001$ ) and binge drinking (OR 0.58,  $p < 0.001$ ). These associations remained significant after adjusting for age, sex, socioeconomic status and mutual adjustments for the other health behaviors. There was no robust association between compassion and physical activity. In longitudinal analyses over a 14-year period, associations were found for at-risk alcohol use (OR 0.63,  $p < 0.001$ ) and binge drinking (OR 0.71,  $p < 0.001$ ) and these associations remained significant after adjustments. When baseline drinking was accounted for, only the association of at risk alcohol use remained significant. Moreover, compassion differentiated persistent binge drinkers from those who were not.

**Discussion:** Dispositional compassion may have a protective effect against unhealthy behaviors, especially excessive alcohol consumption.

9:30 - 9:45

## Self-compassion and hazardous alcohol use: Testing the mediating roles of affect and drinking motives

P. McCoy<sup>1</sup>, F. Sirois<sup>1</sup>, P. Norman<sup>1</sup>

<sup>1</sup>University of Sheffield, United Kingdom

**Background:** Research has linked hazardous alcohol use to inadequate self-regulation and drinking to cope with negative affect. Self-compassion, the tendency to treat oneself kindly during difficult times, is associated with better self-regulation and lower negative affect. The present study investigated whether greater self-compassion predicts lower hazardous alcohol use, and whether affect and drinking motives – drinking to cope and drinking for enhancement – explain this association.

**Methods:** 405 participants (M<sub>age</sub> = 30, SD<sub>age</sub> = 12.03; 66.4% female) completed an online survey including measures of self-compassion (Self-Compassion Scale), positive and negative affect (PANAS), drinking to cope and for enhancement (Drinking Motives Questionnaire), and hazardous alcohol use (AUDIT). Path analyses were conducted using MPlus.

**Findings:** Self-compassion indirectly predicted hazardous alcohol use through negative affect and then drinking to cope ( $\beta = -.34$ , S.E. = .12; LCI = -.62, UCI = -.16), and through drinking to cope alone ( $\beta = -.75$ , S.E. = .03; LCI = -1.16, UCI = -.45). In addition, drinking for enhancement directly predicted HAU ( $\beta = .43$ , S.E. = .05;  $p < .001$ ). The model explained 41% of variance in hazardous alcohol use.

**Discussion:** Results suggest self-compassion may promote self-regulation of hazardous alcohol use by reducing negative affect and drinking motives to cope with negative affect. Self-compassion training may form a promising intervention for hazardous alcohol use.



9:45 - 10:00

## The affect of personality on medication adherence in chronic illness conditions

D.J. Owen<sup>1</sup>, D. Sheffield<sup>1</sup>

<sup>1</sup>University of Derby, United Kingdom

**Background:** Adherence to medication treatment regimes forms a critical component of the successful management of chronic disease in terms of treatment efficacy and positive clinical outcomes. However, medication adherence (MA) rates are variable, with patients routinely taking less than 50% of prescriptions. Recent research suggests that personality may be influential in health behaviours and that personality traits have a significant role in the socio-cognitive processes involved in health-related decision-making such as MA.

**Methods:** A systematic review (PROSPERO CRD42016050998) and meta-analyses were conducted to determine the associations between personality traits and MA in chronic illness.

**Findings:** Equivocal associations were revealed from analysis of 17 empirical studies: overall, Type D personality, neuroticism and hostility were negatively associated with MA, whereas openness and agreeableness were found to positively correlate to adherence. Effect sizes were enhanced when additional influencing factors, such as psychosocial or economic influences, were taken into consideration.

**Discussion:** The review confirms that adherence is a challenge for many patients with chronic illness and that personality traits play a significant role. This report adds to the current literature as it highlights the complex nature of MA and the extent of medication non-adherence together with the impact of personality factors. The specific topic relating to personality affects in MA lacks a copious volume of high-quality studies despite the importance for health providers to provide and evaluate tailored interventions to promote long-term adherence.

10:00 - 10:15

## Multidimensional perfectionism is differentially associated with health behaviours beyond negative affect

F. Sirois<sup>1</sup>, D. Molnar<sup>2</sup>

<sup>1</sup>University of Sheffield, United Kingdom

<sup>2</sup>Brock University, Canada

**Background:** Multidimensional perfectionism includes two overarching dimensions - perfectionistic strivings (PS) and perfectionistic concerns (PC) - that increasingly are shown to have relevance for physical health. Less is known about how perfectionism dimensions relate to health behaviours. The Self-Regulation Resource model posits that individual differences characterised by NA will be prone to poorer health behaviours due to the disruptive effect of NA for self-regulation. Accordingly, we meta-analytically tested whether PC and PS were associated with health-promoting behaviours, after accounting for the influence of NA.

**Methods:** Data from 21 samples (N = 7,513) from our labs were meta-analysed. All samples completed measures of multidimensional perfectionism and health-promoting behaviours; 10 samples completed a measure of negative affect. Random effects meta-analysis was conducted on the unadjusted, partly adjusted, and fully adjusted correlations of PC and PS with health behaviours.

**Findings:** PC was significantly associated with less frequent health behaviours, avg.  $r = -.210$ ,  $srPS = -.219$ , even after accounting for NA,  $srPSNA = -.105$ . The partly adjusted effects varied as a function of sex, with the association becoming more negative as the percent female in the sample increased. PS was significantly associated with more frequent health behaviours after adjusting for the contributions of PC and PC/NA combined, avg.  $srPC = .120$ ,  $srPCNA = -.072$ .

**Discussion:** PC and PS are differentially associated with the practice of health-promoting behaviours, after accounting for NA. Given the rising rates of perfectionism among millennials, our findings underscore perfectionism as an important public health issue that warrants further research.

10:15 - 10:30

## Neuroticism predicts all-cause mortality: A 19-year follow-up study of older adults

P. Ó Súilleabháin<sup>1</sup>, B. Hughes<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** The primary objective of the present study was to examine if the personality traits neuroticism, extraversion, and openness to experience are related to all-cause mortality in adults aged 70+ after a follow-up period of 19 years.

**Methods:** Participants were a locally representative sample of 417 ( $M \pm SD = 84.55 \pm 8.62$  years) drawn from the Berlin Aging Study. Statistical significance levels for hazard ratios were estimated having adjusted for relevant demographic, psychological, and medical risk factors, which included depressive illness and personality traits.

**Findings:** Significant unadjusted effects were observed for all three personality traits; neuroticism ( $HR = 1.123$ ;  $p = 0.026$ ), extraversion ( $HR = 0.875$ ;  $p = 0.011$ ), and openness to experience ( $HR = 0.883$ ;  $p = 0.020$ ). Following adjustment, a significant effect was observed for neuroticism with each 1 SD increase in neuroticism associated with a 13.7% increased risk in all-cause mortality ( $HR = 1.137$ ;  $p = 0.031$ ; 95% CI, 1.012-1.277). Following the trichotomization of neuroticism, the hazard for those more than 1 SD above the mean in neuroticism was significantly greater than the average range ( $HR = 1.588$ ;  $p = 0.001$ ; 95% CI, 1.194-2.111). No significant difference emerged between those 1 SD below the mean and the average range ( $HR = 0.97$ ;  $p = 0.86$ ; 95% CI, 0.73-1.30).

**Discussion:** Findings suggest that neuroticism is associated with an increased risk of all-cause mortality in older aged adults. More specifically, those higher in neuroticism were found to be at a distinctly greater risk of premature mortality.

# Organ donation, and weight-related behaviours

9:00 - 10:30

Room 201

Ronan O'Carroll

9:00 - 9:15

## Multiple emotion group trajectories predict repeat donation behaviour

A. van Dongen<sup>1</sup>, L. Williams<sup>1</sup>, B. Masser<sup>2</sup>, N. Briggs<sup>1</sup>, T. Davison<sup>3</sup>, A. Thijssen<sup>3</sup>

<sup>1</sup>UNSW, Australia

<sup>2</sup>University of Queensland, Australia

<sup>3</sup>Australian Red Cross Blood Service, Australia

**Background:** Despite recognition that blood donation, like many health-related behaviours, is a highly affective experience, the nature and consequence of donors' emotional experience remains relatively unexplored. No research to date has tracked donor emotional experience live as it arises during the donation process nor tracked the impact on return behaviour. This study aimed to fill these gaps.

**Methods:** New whole blood donors (N = 414) reported current experience of several discrete emotions in the waiting area of the donation centre, in the phlebotomy chair, and in the refreshment area after donation. Participants' return behaviour over the ensuing 6 months was tracked as well as that of a non-recruited control group.

**Findings:** On average, 46.4% of participants and 41.2% of the control group returned for a second donation within 6 months. Group-based latent trajectories of three emotions (joy, calmness, and stress) were modelled over time, along with associated likelihood of return. Multiple group trajectory modelling revealed five groups of emotion trajectories. A trajectory of low/increasing joy and calmness, and high/decreasing stress was associated with the lowest odds of return (27.9%; 95%CI [19.7, 37.9]). A trajectory of medium-high/increasing joy and calmness, and low/decreasing stress was associated with the highest odds of return (60.2%; 95%CI [51.0, 68.8]).

**Discussion:** By identifying blood donors' emotion trajectories and the impact of those trajectories on return behaviour, this research paves the way for development of effective emotion-focused interventions to boost retention. These may include encouraging donors to engage in emotion regulation techniques that would promote optimal trajectories.

9:15 - 9:30

## Tailoring lifestyle interventions to low socioeconomic populations; a qualitative study

N. Coupe<sup>1</sup>, S. Cotterill<sup>1</sup>, S. Peters<sup>1</sup>

<sup>1</sup>The University of Manchester, United Kingdom

**Background:** People living in deprived areas are more likely to be overweight or obese, have poorer health outcomes, and tend to benefit less from interventions than those from more affluent backgrounds. One approach to address such health inequalities is to tailor existing interventions to low socioeconomic populations, yet there is limited evidence to inform their design. This study aims to identify how best to tailor lifestyle interventions to low socioeconomic populations to improve outcomes.

**Methods:** Following direct observations of community-run weight loss groups, we interviewed 11 health improvement officers and 14 service users from a low socioeconomic area in the North West of England for this qualitative study. Audio-recorded interviews were transcribed verbatim and analysed using thematic analysis.

**Findings:** We identified two overarching themes within the data. The first theme, managing diversity, included challenges faced in delivering a generic intervention to a diverse population in terms of knowledge, language and literacy skills, and cultural diversity. The second theme incorporated all issues relating to the environment, such as cost, access and availability of food and leisure facilities, and 'life gets in the way'.

**Discussion:** Tailoring interventions for this population is necessary, and more attention is needed to develop ways to ensure service providers and users engage with behaviour change techniques such as goal setting, rather than focussing on information provision alone. Interventions should also be mindful of cost, cultural diversity and language and literacy barriers, as well as potential for disengaging a hard to reach population.

9:30 - 9:45

## Investigating the conditions for the effectiveness of nudging: cue-to-action nudging increases familiar vegetable choice

V. Broers<sup>1</sup>, S. Van den Broucke<sup>1</sup>, C. Taverne<sup>1</sup>, O. Luminet<sup>1</sup>

<sup>1</sup>Université Catholique de Louvain, Belgium

Inulin-type fructans (ITF), which are found in vegetables rich in “prebiotic” nutrients such as leek, salsify, artichoke and Jerusalem artichoke, are known for their prebiotic capacities and may contribute to preventing obesity. The current study aimed to assess the differential effects of type-1 and type-2 nudges to increase the choice for “prebiotic” vegetables at a hot vegetable buffet, using a nonrandomized intervention study design involving two interventions in a university restaurant setting for five consecutive weeks. An intervention was implemented in which customers were exposed to type-2 nudging in the form of short “cue-to-action” messages placed on their trays and above the hot vegetable buffet, and to an additional type-1 nudging intervention in the form of placing dishes with “prebiotic” vegetables in a more accessible place. On average, a total of 503 customers per day purchased food at the restaurant and 28 servings of hot vegetables were sold per day. The beta regression model showed that the “cue-to-action” intervention increased the proportion of customers who used the hot vegetable buffet,  $p < .001$ , OR: 1.24. The beta regression model showed, however, that the proportion of “prebiotic” vegetables chosen decreased during all nudging intervention weeks,  $p < .01$ , OR: 0.73. The effectiveness of nudging seems to be stronger for a familiar group of products than for a unfamiliar specific product within a category. To further interpret these findings, future studies should investigate the importance of the specificity and familiarity of the nudged products for the effectiveness of nudging.

9:45 - 10:00

## An EMA investigation of situational cues responsible for fat talk in Japanese women

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Fat talk in young women has received increasingly more attention as a predictor of body dissatisfaction, which in turn results in negative health, i.e. eating disorders, smoking and steroid use. Whereas previous findings depicted sociocultural factors related to fat talk, little is known about situational factors prompting fat talk. The present study was designed to capture situational cues responsible for fat talk using Ecological Momentary Assessment (EMA).

Participants of the study were 64 college women (mean age = 19.36, SD= 1.28; mean BMI= 20.27, SD= 2.44). Participants were asked to respond to seven prompts in a day for two weeks. Questions asked on a mobile device included places, people whom participants are with, media use, exercise, body checking, and fat talk engagement.

Multilevel model analyses identified situational cues that promoted the engagement in fat talk: being in transit (Odds Rate= 2.17), being with family members (OR= 1.47), using SNS (OR= 1.70) and online messages (OR= 1.71), exercising (OR= 2.89), seeing their bodies in mirror (OR= 1.75), being at clothing stores (OR= 2.39), changing clothes (OR= 1.55), and checking their weight (OR= 1.75).

The current EMA investigation extended previous literature on fat talk by identifying situational cues related to fat talk engagement, i.e. locations, time, media use, and body checking occasions. Our findings suggest that the prevention programs for body dissatisfaction should target aforementioned time and locations to alleviate fat talk and resultant body dissatisfaction.



10:00 - 10:15

## "Could you sit down please?" Employees' experiences of standing in normally-seated workplace meetings

L. Mansfield<sup>1</sup>, J. Hall<sup>1</sup>, L. Smith<sup>2</sup>, M. Rasch<sup>3</sup>, E. Reeves<sup>4</sup>, S. Dewitt<sup>4</sup>, B. Gardner<sup>4</sup>

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<sup>3</sup>University College London, United Kingdom

<sup>4</sup>King's College London, United Kingdom

**Background:** Office workers make up half of the UK workforce, and spend most of their working day sitting, which has been associated with increased morbidity and mortality. Standing in meetings is often proposed as a strategy for reducing workplace sitting, but no study has yet explored how office workers experience standing in meetings.

**Methods:** A semi-structured interview design was used. Twenty-five participants, recruited from three UK universities, volunteered to stand in three separate real-world workplace meetings. They were instructed to stand whenever and for however long they wished, and were interviewed after each. Verbatim transcripts were analysed using Framework Analysis.

**Findings:** Four themes emerged: expectations versus experiences of standing up; negotiating the physical environment; negotiating the meeting context; and resisting work culture and norms. Participants typically experienced physical discomfort from prolonged standing, apparently due to choosing to stand for as long as possible. Standing when leading the meeting was felt to confer a sense of power and control, but when not leading the meeting many participants experienced marked psychological discomfort due to concern at being seen to be violating a compelling perceived sitting norm.

**Discussion:** Findings suggest strategies for acclimatising to standing during meetings. Physical discomfort might be offset by building standing time slowly and incorporating more sit-stand transitions. Psychological discomfort may be lessened by notifying other attendees about intentions to stand. Organisational buy-in to promotional strategies for standing may be required to dispel perceptions of sitting norms, and to progress a wider workplace health and wellbeing agenda.

10:15 - 10:30

## The effect of reciprocity priming on organ donor registration intentions and behaviour

R. O'Carroll<sup>1</sup>, J. Quigley<sup>1</sup>, C. Miller<sup>2</sup>

<sup>1</sup>University of Stirling, United Kingdom

<sup>2</sup>Stirling University, United Kingdom

**Background:** Approximately 400 people in the U.K. will die each year whilst waiting for an organ. Internationally, the demand for organ transplants far exceeds the available supply of donated organs. Development of strategies to increase organ donor registration is therefore vital. We examine if a digital reciprocity prime based on reciprocal altruism can be used to increase organ donor registration intentions and behaviour.

**Methods:** In a randomized controlled trial, 420 participants (223 females) from England and Scotland aged 18+ who were not currently registered organ donors were randomized by block allocation using a 1:1 ratio to receive either a reciprocity prime or control message. After manipulation, they were asked to indicate their organ donation intentions and whether or not they would like to be taken to an organ donation registration and information page.

**Findings:** Participants primed with a reciprocity statement reported greater intent to register as an organ donor than controls (using a 7-point Likert scale where higher scores = greater intention; prime mean = 4.3 (1.6) vs. control mean = 3.7 (1.4),  $P = <.001$ ,  $d = 0.4$  [95%CI = 0.21-0.59]). There was however, no effect on behaviour as rates of participants agreeing to receive the donation register web-link were comparable between those primed at 11% ( $n = 23/210$ ) [95%CI = 7.4-16.0] and controls at 12% ( $n = 25/210$ ) [95%CI = 8.1-17.1],  $X^2(1) = 0.09$ ,  $p = .759$ .

**Discussion:** Reciprocal altruism appears useful for increasing intention towards joining the organ donation register. It does not, however, appear to increase organ donor behaviour.

# Public health interventions with young people

9:00 - 10:30

McMunn

Erin Hoare

9:00 - 9:15

## Parents of teenage boys – knowledge and acceptability of the HPV vaccination

S. Sherman<sup>1</sup>, E. Nailer<sup>1</sup>

<sup>1</sup>Keele University, United Kingdom

**Background:** Male cancers attributable to Human Papillomavirus (HPV) are increasing. Currently in the UK only teenage girls are routinely vaccinated against HPV. Whether to vaccinate boys is a controversial issue with considerable lobbying taking place to change existing policy. The parental perspective has yet to be fully explored.

**Methods:** 186 parents of boys aged 11-18 completed a self-report questionnaire. Part 1 was socio-demographic information; part 2 included a 23 item HPV knowledge scale; part 3 included a 9 item HPV vaccination knowledge scale and part 4, completed by all participants, explored attitudes and beliefs about HPV and HPV vaccination in relation to sons.

**Findings:** 53% of parents had heard of HPV before the survey but their knowledge about health sequelae for men was poor (35% knew HPV causes cancer of the penis but 94% knew HPV causes cervical cancer). Once provided with a brief description of HPV, 86% of parents thought boys should be offered the vaccination. Univariate logistic regression analyses on subscales revealed predictors of approval of vaccination for boys were benefits, influence, harms, risk and general vaccination opinions (all ps <.01).

**Discussion:** There is a pressing need for public education about the potential impact of HPV on male health in order to facilitate uptake of the vaccine in the event of the vaccination programme being extended to men or to facilitate informed decision making about seeking the vaccine privately in the event that it isn't.

9:15 - 9:30

## Parental cognitive bias in child influenza vaccination: interpretation bias is associated with intention to vaccinate

L. Smith<sup>1</sup>, G.J. Rubin<sup>1</sup>, J. Yiend<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom

**Background:** Negative attention and interpretation biases are associated with not adopting healthy eating, smoking cessation and sun-protective behaviours. However, bias has not yet been investigated with regard to parental vaccination behaviour. We investigated whether interpretation bias was associated with vaccine uptake, vaccination intention and parental perception of vaccine side-effects.

**Methods:** Parents of vaccine-eligible children completed the scrambled sentences task (SST), with items relating to the 'source' (natural or manmade; n=158), or 'subject' (self or child; n=163) of the health risk. We measured child vaccination status for the 2015-2016 influenza season, parental vaccination intention for the 2016-2017 influenza season and parental perception of side-effects in vaccinated children. We analysed vaccine uptake and side-effect perception data using repeated-measures ANOVAs, and intention data using linear regressions.

**Findings:** While there was no difference in interpretation bias between parents who did and did not vaccinate their child, nor between those who did and did not perceive side-effects, parents who vaccinated their child showed a larger difference in interpretation bias between naturally-occurring (e.g. germs; more negative) and man-made threats (e.g. vaccines; less negative) than parents who did not vaccinate (interaction effect,  $F(1,144)=5.22$ ,  $p=.024$ ,  $\eta^2=.035$ ). Intention to vaccinate was significantly associated with lower bias for man-made risks ( $\beta=-.24$ ,  $t(152)=-3.05$ ,  $p=.003$ ) and increased bias for naturally-occurring risks ( $\beta=.16$ ,  $t(152)=2.04$ ,  $p=.043$ ).

**Discussion:** This is the first study to investigate associations between interpretation bias and parental vaccination behaviours. Results indicate that interpretation biases may play a role in vaccine intention and uptake. More research is needed to establish this conclusively.

9:30 - 9:45

## School-based educational and on-site vaccination intervention in an urban area

N. Bethke<sup>1</sup>, P. Gellert<sup>1</sup>, J. Seybold<sup>1</sup>

<sup>1</sup>Charité - Universitätsmedizin, Germany

**Background:** Vaccination rates for measles, mumps and rubella (MMR) in German adolescents are still below WHO target of 95%. School-based interventions can be effective regarding improvement of health knowledge and vaccination rates. There is lacking body of evidence for such interventions on MMR.

**Methods:** An educational class based on improving health knowledge, risk perception and self-efficacy regarding vaccination rate was implemented in four urban schools in Berlin, Germany (piloting the main trial), comprising 45 classes, N=859 pupils aged 14-18 years. At two schools improvement on health knowledge and health literacy as an indicator for risk-perception and self-efficacy were measured pre (n=287) and post (n=293) educational class by questionnaire. Mixed models were applied for the total sample to accommodate for the class structure.

**Findings:** With an average of 44% correct answers before the educational class, the improvement (+20%,  $p < .001$ ) corresponded to a medium-to-large effect ( $d = .73$ ). Improvement in health literacy ( $B = 0.22$ ,  $p < .001$ ) showed a small-to-medium effect size ( $d = 0.49$ ). The mixed model revealed a significant association between health knowledge before the educational unit and the school allocation ( $B = 0.09$ ,  $p < .001$ ) and employment status of parents ( $B = -0.01$ ,  $p < .01$ ). Health literacy was significantly associated with school allocation ( $B = -0.05$ ,  $p < .05$ ). There was no significant association with age and gender in both models.

**Discussion:** The implementation of an educational class increased MMR-related knowledge in adolescents. Whether improvements in health knowledge, risk perception, and self-efficacy will translate into onsite-vaccination behavior by means of an educational class will be tested in the main trial.

9:45 - 10:00

## Attitudes and knowledge of e-cigarette use in secondary school children and adults.

L. Simpson<sup>1</sup>, J. Davison<sup>2</sup>, J. Doherty<sup>1</sup>, L. Dunwoody<sup>1</sup>, M. McLaughlin<sup>1</sup>, M. Giles<sup>1</sup>, C. Armour<sup>1</sup>, C. McDowell<sup>1</sup>, G. Gilmore<sup>3</sup>, L. Bauld<sup>4</sup>

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<sup>4</sup>University of Stirling, United Kingdom

**Background:** E-cigarette use among young people and adults in the UK is rapidly increasing. Research suggests intentions to try cigarettes in non-smokers and some view them as a healthy alternative to cigarettes or to aid smoking cessation, however implications for health are unknown. Therefore, research is urgently needed to ascertain patterns and predictors of e-cigarette use. The aim of this study was to determine knowledge, attitudes and potential predictors of e-cigarette use in a sample of young people and adults.

**Methods:** This was a qualitative study based on the Theory of Planned Behaviour (TPB). Fifty-one young people aged between 11-16 years took part in focus groups and sixteen adults took part in focus groups or interviews. Questions were structured around the main constructs of the TPB (attitude, subjective norm and perceived control) and sought to explore the factors influencing e-cigarette use in each of these groups. Thematic Content Analysis was used to elicit the underlying beliefs for all the TPB constructs.

**Results:** Young people and adults differ in their attitudes and beliefs around e-cigarette use. They were perceived as less harmful and as a social behaviour influenced by cost in young people, whereas adults perceived them as a smoking cessation tool whose effects were unknown, but cheaper than cigarettes.

**Conclusions:** These findings will be used to inform a larger study, involving questionnaire development with a cross sectional sample to determine the factors that influence e-cigarette use and to assess their relative importance to young people and adults

10:00 - 10:15

## A school-based obesity prevention programme: theoretical and methodological lessons learned

G. ten Hoor<sup>1</sup>, G. Kok<sup>1</sup>, A. Schols<sup>1</sup>, G. Plasqui<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

**Background:** We developed an interdisciplinary theory- and evidence-based prevention program targeting overweight and obesity, and investigated the 1-year efficacy of this program. As helpful tool, lessons learned are given from our contribution to solving the obesity problem.

**Methods:** We (1) performed a literature study and several cross-sectional studies to investigate whether our ideas from combining biology and psychology were correct, (2) developed a program incorporating strength exercises in gym classes, combined with monthly motivational lessons to engage in physical activities after school, (3) investigated the 1-year efficacy and found improved body composition and increased physical activity of adolescents.

**Findings:** (1) Interdisciplinary research makes a major contribution to scientific innovation, leads to greater breadth and depth in individual disciplines, generates cross-disciplinary knowledge, and often plays a vital role in analyzing the major challenges facing society. (2) Being better at strength exercises (compared to aerobic exercises) may improve overweight youngsters' feelings of competence and relatedness, and increase their sense of self-worth. Positive social experiences with strength exercises may, over time, increase intrinsic motivation for exercise in overweight youngsters.

**Discussion:** We developed, implemented, and evaluated an interdisciplinary theory- and evidence-based program that positively influenced body composition and physical activity. We suggest adding strength exercises to children's and youngsters' physical activity possibilities: when performed under qualified supervision they might have positive long-term health benefits.



10:15 - 10:30

## Australian Capital Territory It's Your Move: lessons learnt for the prevention of mental illness

E. Hoare<sup>1</sup>, L. Millar<sup>1</sup>, S. Allender<sup>1</sup>

<sup>1</sup>Deakin University, Australia

**Background:** The Australian Capital Territory It's Your Move (ACT IYM) was a school-based systems approach to improve dietary and activity related behaviours among Australian students (n=660). Whilst one school reported a significant decrease in depressive symptoms from baseline to follow-up, the overall health outcomes of the project were limited. A process evaluation was conducted to examine barriers and enablers to intervention success.

**Methods:** Key stakeholders from schools participated in semi-structured interviews based on barriers and enablers to intervention success at baseline, mid- and post-intervention. Interviews were transcribed and coded for thematic analysis. Interviews were based on World Health Organization Building Blocks of a Health System. Interview data were triangulated with school performance reports and causal loop diagrams to identify enablers and barriers to intervention success.

**Findings:** The challenges faced in implementing nutritional and physical activity strategies for adolescent mental health were multi-faceted. School leadership support was an identified enabler to intervention success, as were top-down intervention initiatives that were embedded in the school community as opposed to one-off, siloed programmes. Inadequate 'buy-in' from key stakeholders limited intervention implementation. Strengthening partnerships within schools and in the wider community was a critical enabler for adolescent mental health support. Students were largely supportive of positive health initiatives within schools.

**Discussion:** Whilst the systems approach was in theory a useful approach for accounting for complexity, the measurement of system changes requires further development. Incorporating mental health as a specific objective within interventions aiming to facilitate nutrition and physical activity among young people is warranted.

**ROUNDTABLE: Beyond academia:  
Opportunities and challenges of  
applying health psychology research in  
practical settings**

11:00 - 12:30

O'Flaherty

Rachel Carey

## Beyond academia: Opportunities and challenges of applying health psychology research in practical settings

R. Carey<sup>1,2</sup>, N. Hankonen<sup>3</sup>, F. Lorencatto<sup>1</sup>, J. Lacroix<sup>4</sup>, C. Lefevre-Lewis<sup>5</sup>

<sup>1</sup>University College London, United Kingdom

<sup>2</sup>Zinc, United Kingdom

<sup>3</sup>University of Tampere, Finland

<sup>4</sup>Philips Research, Netherlands

<sup>5</sup>UCL & Healthbridge Ltd, United Kingdom

**Purpose:** This roundtable will facilitate discussion and debate about approaches to applying health psychology research outside of academic settings, in policy and practice, highlighting arising challenges and opportunities.

**Objectives:**

- (1) To introduce and discuss the range of applications health psychology research can have across sectors, disciplines and countries;
- (2) To consider the associated challenges and opportunities;
- (3) To foster international collaboration and shared learning across health psychology researchers working in applied settings;
- (4) To identify a research agenda, and future collaborative opportunities, to advance the efficiency of knowledge accumulation and transmission in health psychology research application.

**Rationale:** Mobilising knowledge from research and applying it in practice can present valuable learning opportunities for both the researcher and the practitioner / policy-maker. As health psychology researchers working in applied settings, we are often faced with difficult decisions, complex challenges, and exciting opportunities - but the extent to which we share our experiences and learnings is often minimal. Maximising the potential for knowledge accumulation in this area, across researchers and countries, requires opportunities for learning about each other's work and advancing ideas collectively. A roundtable discussion is an ideal format for this exchange of experience and perspectives.

**Summary:** The five contributors have applied health psychology research across various organisations, sectors and countries, and bring a diverse range of perspectives. Nelli Hankonen will offer a policy perspective from her collaboration with the Finnish government to advance the use of behavioural science and field experiments to shape public policy. Fabiana Lorencatto will share an applied healthcare perspective, drawing on her work with healthcare professionals. Joyca Lacroix will present on her experience working in a leading multinational health technology company focused on innovations that improve health and healthcare results across the health continuum. Carmen Lefevre will present on her experience applying principles from behavioural science within a UX team at a digital health startup. Rachel Carey will share her experience working with a social impact business-builder.

# ROUNDTABLE: Identifying useful synergies of theory and methods across non-clinical and clinical fatigue

11:00 - 12:30

D'Arcy Thomson

Daniel Powell & Derek Johnston

## Identifying useful synergies of theory and methods across non-clinical and clinical fatigue

D. Powel<sup>1</sup>, D. Johnston<sup>1</sup>, S. Marcora<sup>2</sup>, S. Van Damme<sup>4</sup>, F. Muller<sup>3</sup>, A. Wearden<sup>5</sup>

<sup>1</sup> University of Aberdeen, UK

<sup>2</sup> University of Kent, UK

<sup>3</sup> University of Groningen, University Medical Center Groningen, the Netherlands

<sup>4</sup> Ghent University, Belgium

<sup>5</sup> University of Manchester, UK

**Purpose:** The roundtable will focus on the application of contemporary theories and methodologies to fatigue and fatigability across different domains in health psychology.

**Objectives:**

- To discuss different theoretical accounts of fatigue
- To consider synergies in theories and methods across non-clinical and clinical fatigue
- To generate discussion, share expertise and approaches, and promote collaboration in advancing our understanding of fatigue

**Rationale:** Fatigue is ubiquitous but its manifestations come in many guises: it is an everyday experience for many in response to (or in expectation of continued) physical or mental exertion; and it is an intense and disabling symptom for many people living with chronic illness. Fatigue is a significant factor in determining quality of life, and is increasingly regarded as being important in health-related decision making and behaviours. However, this complex, multidimensional phenomenon is still poorly understood despite decades of research. This roundtable will provide a timely opportunity to highlight different perspectives on fatigue, with discussion on the applicability of different theories and methods across the clinical and non-clinical domains.

**Summary:** This roundtable will bring together expertise in fatigue from different approaches. Dan Powell will provide an introduction and overview of different applications of health psychology for studying and understanding fatigue. Samuele Marcora will discuss how perception of effort interacts with motivational factors to influence performance in athletes and the choice to engage or not with exercise for health in the general population. He will outline how perceived effort affects decision making related to physical tasks, its neurophysiology, and how strategies to reduce it can improve physical performance and exercise behaviour. Stefaan Van Damme will argue that the challenges associated with having a chronic illness (chronic pain here as the case example) might bias cost-benefit analyses of effortful behaviour towards a negative outcome, resulting in faster generation of fatigue. He will discuss different pathways through which chronic pain affects fatigue, including executive functioning and reward processing. Fabiola Müller will argue that fatigue is influenced by psychosocial factors, including partner behaviours. Using cancer-related fatigue as an example, she will argue that – while initially precipitated by clinical variables – cancer-related fatigue can be conceptualised as a dyadic stressor that affects both

## Roundtable

members of the couple and relationship satisfaction. Alison Wearden will review what we know about correlates and predictors of fatigue across numerous long-term health conditions and will discuss whether a common model of fatigue is adequate across conditions.

# Communicating health: health, risk, and decision making

11:00 - 12:30

Kirwan

Anne Marie Plass

11:00 - 11:15

## Development of targeted communication strategies to promote prudent antibiotic usage: needs assessment among the public

V. Feck<sup>1</sup>, V. Visschers<sup>2</sup>, A. Herrmann<sup>1</sup>

<sup>1</sup>School of Applied Psychology, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

<sup>2</sup>FHNW, Switzerland

**Background:** Public behaviour is a crucial factor to reduce the risk of antibiotic resistance. A better understanding of the public's attitudes, knowledge and beliefs regarding antibiotics and antibiotic resistance is required to recommend effective communication strategies to promote a more prudent antibiotic usage as well as the adoption of measures to prevent the spread of resistant bacteria.

**Method:** An online survey was conducted among the Swiss population (N = 1,260). We applied cluster analysis to identify segments based on the respondents' demand for and perception of antibiotics. Through multiple ANOVAs, segments were compared on their demographic characteristics, knowledge, as well as on their cultural values and other variables, such as perceived responsibility.

**Findings:** Four segments were identified. They differed significantly on all perception variables and their demand for antibiotics ( $F_s > 58$ ,  $p_s < .001$ ,  $\eta^2_s > .13$ ): (1) Experienced Sceptics reported a low demand and usage of antibiotics, were aware of the risks and had more experience with antibiotic resistance. (2) Knowledgeable Undifferentiated had lots of knowledge about antibiotics, antibiotic resistance and preventive measures but were neither very concerned about antibiotic resistance nor did they perceive many benefits in using antibiotics. (3) Young Unwilling showed little willingness to adopt preventive measures, were younger and rather uncritical regarding antibiotics. (4) Self-Serving Users reported a high demand and usage of antibiotics, perceived a rather low responsibility and held strong egoistic values.

**Discussion:** To promote prudent antibiotic usage, recommendations for communication strategies were developed targeting the different segments' needs.



11:15 - 11:30

## Understanding health professionals' experiences of discussing HPV with head and neck cancer patients

M. O'Connor<sup>1</sup>, J. Waller<sup>2</sup>, P. Gallagher<sup>3</sup>, I. Keogh<sup>4</sup>, D. MacCarthy<sup>5</sup>, E. O'Sullivan<sup>6</sup>, C. Timon<sup>7</sup>, C. Martin<sup>8</sup>, J. O'Leary<sup>8</sup>, L. Sharp<sup>9</sup>

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<sup>5</sup>Dublin Dental School, Ireland

<sup>6</sup>Cork University Dental Hospital, Ireland

<sup>7</sup>St James Hospital, Ireland

<sup>8</sup>Trinity College Dublin, Ireland

<sup>9</sup>Newcastle University, United Kingdom

**Background:** The prevalence of human papillomavirus (HPV) associated head and neck cancer (HNC) is increasing worldwide. We explored healthcare professionals' (HCPs) experiences of discussing HPV with HNC patients in Ireland.

**Methods:** Interviews were conducted with 20 health professionals working with HNC patients. Thematic analysis using the Framework Approach was used to analyse verbatim transcripts with the theoretical domains framework (TDF) guiding analysis.

**Results:** Surgeons/oncologists felt it was beneficial to talk to patients about HPV when initially discussing their cancer diagnosis (particularly in the context of better prognosis). HCPs seeing patients further into their cancer management (e.g. dental surgeons) were less likely to see a need to discuss HPV; issues like side-effects of treatment took precedence. Levels of comfort around discussing HPV varied, with some saying they were uncomfortable due to the sexual nature of HPV transmission; others did not distinguish between talking about HPV and other causal factors like smoking. Barriers to discussing HPV included: lack of privacy in busy clinics, lack of confidence in one's HPV knowledge and a partner/family member being present with the patient. Many HCPs perceived public awareness of HPV and head and neck cancer as inadequate, making it difficult to discuss with patients. Patients rarely initiated discussions or asked questions about HPV.

**Conclusion:** As far as we are aware, this is the first study of its kind to be conducted in Ireland. The findings may be useful in developing information resources around HPV and head and neck cancer for both patients and health professionals.

11:30 - 11:45

## Using positively framed risk information in patient information leaflets to reduce side-effect reporting

R. Webster<sup>1</sup>, J. Weinman<sup>1</sup>, J. Rubin<sup>1</sup>

<sup>1</sup>King's College London, United Kingdom

**Background:** Many symptoms which are attributed to medication as side-effects are the result of a psychologically mediated “nocebo effect”, triggered by negative expectations. This study investigated if changing how medication side-effect information is framed in the accompanying patient information leaflets (PILs) reduces symptom reporting.

**Methods:** 203 healthy volunteers aged 18-64 were recruited from 2015-2016 into a double-blind randomised controlled trial at the King's College Hospital Clinical Research Facility. Participants were randomised to receive a PIL for “a well-known tablet available without prescription” that used standard side-effect wording (Common, 1 in 10 people will be affected) or positively framed wording (Uncommon, 90% of people will not be affected). Participants then took the tablet (a placebo) and reported symptoms one hour later using the Generic Assessments of Side-Effects scale. The main outcomes included the number of participants who attributed symptoms to the tablet, and the number and severity of attributed symptoms, analysed using a hurdle model consisting of a joint logistic and truncated negative binomial regression.

**Findings:** 101 participants were assigned the standard PIL and 102 the positively framed PIL. Significantly more standard PIL participants attributed symptoms to the tablet (n=55, 54.5%) compared to positively framed PIL participants (n=40, 39.2%), OR=0.66, 95% CI[0.46-0.93]. Positive framing did not reduce the total number (p=.148) or severity (p=.149) of attributed symptoms.

**Discussion:** Positive framing appears to be a cheap, effective intervention to reduce the likelihood of participants attributing nocebo-induced symptoms to medications; however future work is needed to assess the effectiveness in a patient population.

11:45 - 12:00

## Change and Habituation in Risk Perception after Health Risk Feedback

J. Kollmann<sup>1</sup>, N. Lages<sup>1</sup>, L.J. Debbeler<sup>1</sup>, H. Szymczak<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Changing lifestyle-associated risk factors, such as increased cholesterol levels, is a core preventive measure for chronic diseases. A motivational precondition for lifestyle change is the perception of a personal risk. Since risk perceptions have mostly been studied cross-sectionally, the present study has a longitudinal design. Within the framework of the Cue Adaptive Reasoning Account (CARA) we examined trajectories of risk perception over a period of six months.

As part of the Konstanz Life-Study blood samples of all participants (N=1193) were collected at T1. Participants were asked to report their expectations regarding their cholesterol levels (positive/negative expectation). Six weeks later (T2), participants received a standardised written risk feedback (positive/negative feedback). Additionally, risk perception was assessed at T2 as well as one month (T3) and six months (T4) later.

The analysis of the 2x2x3 design (expectancy x risk feedback x measurement point of risk perception) revealed that participants with expectancy-congruent risk feedback had a stable risk perception over all measurement points. Interestingly, participants with expectancy-incongruent feedback showed a differential trajectory. Both groups (unexpected negative/positive feedback) showed a similar risk perception at T2 and T3. However, at T4 participants with an unexpected negative risk feedback showed a significant decline in risk perception compared with those with an unexpected positive feedback.

In accordance with the CARA-approach, these findings substantiate the importance of expectancies in the context of processing risk information and show that habitational effects might emerge only with a delay after a critical event. Longitudinal designs are prerequisite to adequately observing these dynamics.

12:00 - 12:15

## Stable or currently changing? Visualizing the trajectories of risk perception over 1.5 years

N. Lages<sup>1</sup>, J. Kollmann<sup>1</sup>, L.J. Debbeler<sup>1</sup>, H. Szymczak<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Commonly, risk perception is measured cross-sectionally. Hence, it remains unclear to what extent risk perception is stable within individuals across time. The current longitudinal health screening study provided personalized risk feedback twice and enables the analysis of the dynamics and variability of risk perceptions at the individual level.

Participants of the Konstanz Life-Study provided blood samples at a one-year interval (T1, T5). Cholesterol related risk perception (worry) was assessed at seven distinct occasions (N=140): at blood sampling (T1, T5), provision of cholesterol feedback (T2, T6), five weeks post feedback (T3, T7) and six months post feedback (T4). By using an innovative way of visualization, raw scores of risk perception were analyzed at an individual level.

Across time and within individuals, substantial interindividual heterogeneity in risk perception change occurred: while 11.4% showed a stable risk perception, 88.6% showed small to substantial changes (within-individual SD 0-2.31). Across individuals, at T1, the majority (88.5%) showed a low risk perception (M=1.45) with low variability (SD=1.06). At T2, after feedback, mean levels and variability accelerated (M=2.68, SD=1.7) and remained increased at T3 (M=2.41, SD=1.43) and T4 (M=2.15, SD=1.36). However, at T5, mean level decreased (M=1.87, SD=1.35). At T6, after the second feedback, variability increased again (M=2.99, SD=1.7) and remained elevated at T7 (M=2.41, SD=1.43).

The visualization of the data at the individual level clearly shows a high degree of variability and systematic changes in risk perception within and between individuals. Even months after receiving risk feedback, risk perception remained dynamic and diverse.

12:15 - 12:30

## Visual attention when using a patient decision aid: an eye-tracking study among older cancer patients

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<sup>4</sup>National Institute for Public Health and the Environment (RIVM), Netherlands

**Purpose:** To assess older cancer patients' visual attention to information in a decision aid, and to test differences between exposure to a 'complex' versus a 'simple' table.

**Methods:** Eye-tracking experiment with 18 cancer patients (> 65 yrs). Participants viewed information about pros and cons of two treatment options for early stage lung cancer. Eye tracking assessed dwell times for three information types (1) treatment outcomes (e.g., 5 yrs survival rates); (2) side-effects (e.g. risk of fatigue); (3) procedures (e.g., lymph glands removal and certainty that can be obtained that tumor is gone). A mixed between-within subjects ANOVA was conducted with relative dwell time as dependent variable, information type (outcomes, side-effects, procedures) as within-subjects variable and type of table (complex, simple) as between-subjects variable.

**Results:** The main effect of information type approached significance ( $p = .055$ ,  $\eta^2 = .282$ ). Relative dwell times were significantly shorter for procedures compared to both treatment outcomes ( $p < .001$ ,  $\eta^2 = .033$ ) and side-effects ( $p = .019$ ,  $\eta^2 = .407$ ). No significant interaction effect was found between information type and type of table ( $p = .596$ ,  $\eta^2 = .030$ ), nor was there a significant main effect of type of table ( $p = .117$ ,  $\eta^2 = .208$ ).

**Conclusions:** The least amount of visual attention was spent on the procedures of treatment options by older cancer patients. Simplifying a typical complex table did not alter this. An important question is whether this information about procedures is actually considered relatively less important by older cancer patients.

# Automaticity and implicit cognitions

11:00 - 12:30

Larmor

Kyra Hamilton

11:00 - 11:15

## Testing a three-phase integrated model of health behaviour for binge drinking and dental flossing

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**Background:** The tendency to adhere to one particular theory or approach may often constrain researchers to the tenets of that particular theory, rather than focusing on multiple mechanisms and processes that may be salient for multiple behaviours or conditions. Riding on the cusp of recent research, we aimed to test a three-phase integrated model of health behaviour by combining motivational, volitional, and automatic processes to better understand individuals' binge drinking and daily flossing behaviours.

**Methods:** Participant samples included community-dwelling Australian adults for the flossing study (N=118; Mage=33.91, SD=12.93) and young Australian university students for the binge drinking study (N=117; Mage=23.06, SD=7.67). Participants completed an online survey which assessed measures of motivational factors from the theory of planned behaviour and self-determination theory, volitional factors from the health action process approach, and automatic factors from theories of habit. A prospective design with two waves of data collection spaced six weeks apart was adopted.

**Findings:** Well-fitting structural equation models were observed for both behaviours. For dental flossing, motivational (intention;  $\beta=.284$ ,  $p<.001$ ) and automatic (behavioural frequency;  $\beta=.467$ ,  $p<.001$ ) processes significantly predicted behaviour. For binge drinking, volitional (action planning;  $\beta=.172$ ,  $p<.05$ ) and automatic (behavioural recency;  $\beta=.250$ ,  $p<.01$ ) processes predicted behaviour.

**Discussion:** Current findings add to the emerging research using integrated models of behaviour to better understand individuals' health and suggest important potential routes to behavioural performance that may differ depending on the behaviour under investigation. Future interventions should therefore consider the multiple processes advocated in the integrative model as necessary for motivated action.

11:15 - 11:30

## Feeling all over the place: Daily variability in negative affect and cue responsiveness in snacking

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<sup>1</sup>Universität Bremen, Germany

<sup>2</sup>University of Tasmania, Australia

**Background:** Relationships between negative affect (NA) and discretionary food intake ('snacking') are complex. One relatively consistent finding is that higher NA is associated with higher snack food intake. However, the mechanisms behind this association are not well understood. This study takes a self-control perspective and examines whether individuals are more likely to snack when exposed to known external and internal cues on days where their NA levels are higher or when within-day variability of NA is higher.

**Methods:** Data from existing ecological momentary assessment study in 71 individuals (39 complete data sets). Combination of event-based (food logs) and randomly timed assessments over 14 days, known food cues were assessed during both assessment types. NA level (daily within-participant means) and NA variability (daily within-participant SDs) were used to predict day-to-day cue responsiveness in three-level hierarchical random effects logistic regressions.

**Findings:** The odds of snacking significantly increased when snack food was available (OR = 3.35), when others were eating (OR = 3.72), and when participants experienced more negative affect (OR = 1.02). These odds were significantly moderated by within-day NA variability, but not daily NA levels such that the odds increased with NA variability.

**Discussion:** Participants were more susceptible to known snacking cues on days with higher variability in NA. This supports a self-control perspective which suggests that self-control might be depleted when participants experience more variation in their NA levels.



11:30 - 11:45

## Bigger buffet, different choices? Assortment size, implicit and explicit attitudes as food choice precursors.

T. Volk<sup>1</sup>, L.M. König<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Food choices are influenced consciously and unconsciously by individual and environmental factors. The present study investigated the impact of explicit and implicit attitudes and different assortment sizes on food choice. In a multiple option choice task, sixty-nine participants were asked to compose a typical lunch from a (fake) food buffet, containing either five, 15 or 25 different food items. Due to a higher cognitive demand in the 15-item and 25-item condition, it was hypothesized that implicit attitudes have a greater impact in these conditions while an inverse pattern was expected for explicit attitudes. Manipulation checks confirmed that assortment size manipulation resulted in differently perceived assortment variety. Results from a path model showed that explicit attitudes predicted fruit vs. confectionery food choice in all three conditions equally. Conversely, implicit attitudes and their interaction with explicit attitudes showed no significant association with food choice. Interestingly, participants chose more fruit relative to confectionery when the assortment size was bigger. As previous studies, the results support the importance of explicit attitudes as a food choice precursor and emphasize the need of further research on the preconditions for the impact of implicit attitudes and variation of the environment. Possible social and gender influences as well as the experimental manipulation are discussed and comparisons with former research are drawn.

11:45 - 12:00

## Exploring Approach Bias for Exercise Cues: An Application of the Implicit Association Test

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<sup>1</sup>Griffith University, Australia

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<sup>3</sup>Flinders University, Australia

**Background:** Evidence suggests that exercise can be influenced by both explicit and implicit motivational processes. Moreover, behaviour is suggested to be regulated more strongly by implicit processes when cognitive resources are limited. The current research used a modified implicit association test to investigate approach biases for exercise cues. Study 1 explored differences in approach bias between active and inactive individuals and investigated the relation between approach bias and self-determined exercise motivation. Study 2 explored the effects of cognitive load on the relation between approach bias and immediate exercise behaviour.

**Methods:** Study 1 (N = 114) employed a cross-sectional design. Participants completed a recoding-free implicit association test (IAT-RF) to assess the strength of approach bias and completed self-reported measures of exercise motivation and exercise engagement. Study 2 (N = 101) employed an experimental design. After completing the IAT-RF and measures of exercise motivation, habit, and exercise engagement, participants completed five-minutes of stationary cycling whilst remembering either a two digit (low load condition) or an eight digit (high load condition) string of numbers.

**Results:** Results revealed that sufficiently active individuals displayed a significantly stronger approach bias for exercise than inactive individuals (Study 1). Furthermore, approach bias was positively correlated with self-determined exercise motivation (Study 1 and 2) and exercise habits (Study 2). Contrary to our predictions (Study 2), approach bias was unrelated to cycling performance for both the high and low cognitive load conditions.

**Conclusion:** These findings partly support current dual-process models in suggesting that exercise engagement is linked to implicit motivational processes.

12:00 - 12:15

## How conscious and unconscious cognitions jointly determine reduced red meat intake

C. Muschalik<sup>1</sup>, I. Elfeddali<sup>1</sup>, R. Crutzen<sup>1</sup>, H. de Vries<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

**Background:** Excessive red meat consumption (RMC) is a threat to people's health as it is linked to the development of non-communicable diseases, e.g. cancer. Studies demonstrated that conscious, so called explicit cognitions (e.g. intention and other social-cognitive variables) are related to a reduced RMC. Also unconscious, so called implicit attitudes (IA) were shown to play a role in meat consumption. It is unclear how conscious and unconscious cognitions jointly influence intention and RMC. This study aims to clarify the exact pattern in order to inform future intervention efforts.

**Methods:** Explicit cognitions (perceived pros, perceived cons, social norms, social modeling, self-efficacy, intention), IA, and self-reported RMC were measured at baseline (T0; N=1786), after one month (T1; N= 972) and after three months (T2; N = 623). Linear and hierarchical multiple regression analyses assessed direct and moderating effects between implicit and explicit cognitions.

**Findings:** Perceived cons, social norms, and self-efficacy explained 26% of the variance in T0 and T1 intention to reduce RMC ( $R^2=.26$ ). IA did not explain unique variance in T0 or T2 intention ( $p=.92$ ) but in T1 intention ( $\beta=-.06, p=.03$ ). Further, IA moderated the relationships between self-efficacy and T0 intention ( $\beta=-0.45, p=.04$ ) and self-efficacy and T0 RMC ( $\beta=-0.44, p=.07$ ). Moreover they moderated the relation between self-efficacy and a moderate RMC at T2 ( $\beta=-1.97, p=.05$ )

**Discussion:** Contrary to the idea that conscious and unconscious cognitions are unrelated, we found IA to be directly and indirectly related to intention and RMC. Efforts to decrease RMC could be improved by also tackling IA next to explicit cognitions.

12:15 - 12:30

## Testing an integrated dual process, dual-phase model for sugar consumption among university students

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In response to the proliferation of evidence highlighting the need for dietary sugar reduction in the prevention of chronic illnesses and conditions, researchers have begun to explore the determinants of dietary sugar intake, particularly the psychological and behavioural factors. The goal of such research is to provide formative evidence that can be used as a basis for effective behavioural interventions to reduce sugar intake. In the current study, we aimed to extend this research by testing the efficacy of an integrated dual-process, dual-phase model derived from multiple theories to predict sugar consumption. Using a prospective design, university students (N = 90) completed initial measures of the reflective (autonomous motivation, controlled motivation, intentions, attitudes, subjective norm, and perceived behavioural control), impulsive (implicit attitudes), volitional (action planning and coping planning), and behavioural (past sugar consumption) components of the proposed integrated model. Self-reported sugar consumption was measured two weeks later. A structural equation model revealed that intentions, implicit attitudes, and, indirectly, autonomous motivation to reduce sugar consumption had small, significant effects on sugar consumption. Attitudes, subjective norm, and, indirectly, autonomous motivation to reduce sugar consumption predicted intentions. There were no effects of the planning constructs. Model effects were independent of the effects of past sugar consumption. The model identified the relative contribution of reflective and impulsive components in predicting sugar consumption. Given the prominent role of the impulsive component, interventions that assist individuals in managing cues to action and behavioural monitoring are likely to be effective in regulating sugar consumption.

# Community and population public health interventions

11:00 - 12:30

Room 201

David French

11:00 - 11:15

## Communicating evidence of effectiveness for government policies and its impact on public support: A meta-analysis

J. Reynolds<sup>1</sup>, K. Stautz<sup>1</sup>, M. Pilling<sup>1</sup>, S. van der Linden<sup>1</sup>, T. Marteau<sup>1</sup>

<sup>1</sup>University of Cambridge, United Kingdom

**Background:** Low public support for government interventions in health, environment and other policy domains can be a barrier to implementation. Communicating evidence of policy effectiveness has been used to raise public support, with mixed results. This review provides the first systematic synthesis of findings from these studies.

**Methods:** Eligible studies were randomised experiments that included a control group, an intervention group that provided evidence of a policy's effectiveness at achieving a salient outcome, and measured support for the policy. **Databases:** ASSIA, EconLit, EMBASE, PsycINFO, Public Affairs Information Service, PubMed, Science Direct, Web of Science, and Open Grey (inception to October 2017). The EPHPP quality assessment tool for quantitative studies was used to assess study quality and bias. Study characteristics and interventions were coded for variables that might influence changes in support for the policy.

**Results:** We examined 6,498 abstracts and included 36 studies (N = 31,351). Random effects meta-analysis revealed that communicating evidence of a policy's effectiveness increased support for the policy (SMD = .10, 95% CI [.06, .13], p < .0001). This effect did not vary by i. policy domain (i.e., health, environment, other), ii. the presence of confounders in the interventions, or iii. other intervention characteristics. The included studies were mostly at risk of bias and of low quality.

**Discussion:** These findings suggest that public support for policies in a range of domains including health and the environment can be increased by providing evidence of their effectiveness. Uncertainty remains about the most effective ways of communicating such evidence.

11:15 - 11:30

## Taxes, labels, or nudges? Public acceptance of various interventions aimed at reducing sugar intake

D. Hagmann<sup>1</sup>, M. Siegrist<sup>1</sup>, C. Hartmann<sup>1</sup>

<sup>1</sup>ETH Zürich, Institute for Environmental Decisions (IED), Consumer Behavior, Switzerland

This study investigated public acceptance of several specific government interventions to lower sugar intake in the population, using data from the first wave (2017) of a large survey (Swiss Food Panel 2.0) on eating behavior conducted in the German- and French-speaking regions of Switzerland (N = 5,238; 48.7% men). Acceptance varied considerably among different interventions; the least intrusive, such as a sugar label on products and public health campaigns, garnered most support, while more restrictive interventions, such as taxation, substitution with artificial sweeteners, and reduction of portion sizes, generated higher resistance. Consciousness concerning sugar intake and diet-related health consciousness were the strongest predictors for acceptance. Support was generally stronger among women, dieters, residents from the French-speaking part of Switzerland, and people living in urban areas. Risk groups, including overweight participants and those consuming higher amounts of sugar-sweetened beverages, seemed to be less accessible for interventions. For the conceptualization of interventions, these differences have to be taken into account and the focus should be on improving acceptance, particularly among risk groups, thus enabling successful interventions.

11:30 - 11:45

## Consumption of sugar sweetened beverages: Informed choice or a product of an obesogenic environment.

K. Robertson<sup>1</sup>, M. Thyne<sup>1</sup>, J. Green<sup>1</sup>

<sup>1</sup>University of Otago, New Zealand

**Background:** Researchers worldwide are advocating for measures to reduce sugar sweetened beverage (SSB) consumption. A tax on fizzy drinks has been called for in New Zealand, however, 'Big Businesses' oppose the tax, arguing that it would encroach on consumer freedom to make their own choices. The present study compares the diet and intentional dietary control of SSB consumers to non-SSB consumers to determine if SSB consumption is best explained by factors related to individual control or rather, wider involvement in an obesogenic environment.

**Aim:** To compare self-reported dietary consumption and conscious healthy eating behaviours of New Zealand consumers who had or had not consumed SSBs over a 24 hour period.

**Method:** We conducted an online cross-sectional survey of a representative sample of New Zealanders (n=2007), measuring their food and beverage intake over a 24 hour period and self-reported intentions to eat healthily. Logistic regression was used to predict SSB consumption within the previous 24 hours.

**Results:** Compared to non-SSB consumers, SSB consumers were more likely to have eaten the following: confectionary; dessert or ice cream; takeaways; and pre-prepared food. SSB consumers were less likely to make a conscious effort to avoid unhealthy food (e.g., sugar, additives, and cholesterol). SSB consumers were also less likely to have eaten breakfast.

**Discussion:** Consuming SSBs was associated with a lack of intentional dietary control and engagement in the obesogenic environment lending support to the need for government led regulation of SSBs rather than interventions targeted at the individual level.



11:45 - 12:00

## Reducing loneliness in older adults: Using RE-AIM to evaluate community-based physical activity programmes.

S. Hotham<sup>1</sup>

<sup>1</sup>University of Kent, United Kingdom

**Background:** In the UK 1.2 million older adults are chronically lonely (Age UK, 2016). To tackle this growing trend the Big Lottery 'Ageing Better' scheme provided large scale investments across 14 projects to support the implementation and evaluation of interventions to reduce loneliness. Based on evidence that physical activity diminishes loneliness (Pels & Kleinert, 2016), one project - 'Ageless Thanet' –delivered community-based physical activity programmes to explore the impact on individuals who were lonely or 'at risk' of becoming lonely.

**Methods:** The RE-AIM framework (Glasgow, 1999) informed a mixed-methods outcomes and process evaluation. Quantitative data on loneliness, social isolation and physical activity were gathered pre and post attendance at 10-week programmes, delivering a range of activities (e.g., Tai Chi, Swimming). Implementation was explored by interviews with delivery partners.

**Findings:** N=247 (80.6% female) provided pre and post data on reach and effectiveness. 50.9% identified as moderately or intensely lonely at baseline, suggesting adequate success at recruiting the target population. Paired-samples t-tests revealed a statistically significant decrease in social isolation ( $p<.01$ ) but not loneliness ( $p=.09$ ). Walking and moderate physical activity improved ( $p<.05$ ). Framework analysis of interviews highlighted barriers and facilitators - for example, engaging target group and appropriate referral pathways post-intervention.

**Conclusions:** The evaluation provides mixed evidence on the impact of community-based physical activity programmes as a prevention and early intervention strategy. While groups provided an opportunity to build social networks and form new meaningful connections, the benefit of this is potentially limited to feelings of social isolation and not loneliness.

12:00 - 12:15

## Testing a self-efficacy based intervention to improving acute stroke response: An experimental online study

L. Wilhelm<sup>1</sup>, A. Wiedemann<sup>2</sup>, R. O'Carroll<sup>3</sup>, S. Dombrowski<sup>3</sup>

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<sup>2</sup>Dearemployee GmbH, Germany

<sup>3</sup>University of Stirling, United Kingdom

**Background:** Contacting emergency medical services (EMS) immediately when witnessing a stroke is crucial, but is often delayed. Self-efficacy is widely recognised as important in health-related decision-making. This study explored whether a self-efficacy based intervention could improve correct stroke response using a scenario-based measure, and whether recognition self-efficacy and response self-efficacy served as mechanisms.

**Methods:** Cross-sectional experimental online study, 192 adults (M=35.67 years, SD=15.70). Participants were randomized to receive either a public awareness raising video from the UK ActFAST campaign (active control group), the same video together with a self-efficacy based add-on (intervention group), or no intervention (passive control group). Recognition and response self-efficacy and correct stroke responses were assessed post-test-only with a scenario-based measure. A mediation model was employed.

**Findings:** While correct response was lower in the passive control than in the intervention group ( $c1=-0.61$ ,  $SE=0.29$ , 95% CIs $[-\infty,-0.12]$ ), there was no significant difference between active control and intervention group ( $c2=-0.09$ ,  $SE=0.30$ , 95% CI $[-\infty,0.40]$ ). Recognition self-efficacy ( $b3=0.43$ ,  $SE=0.11$ , 95% CIs $[0.25,\infty]$ ), but not response self-efficacy ( $b4=0.01$ ,  $SE=0.11$ , 95% CI $[-0.17,\infty]$ ), was associated with correct stroke response. No mediating effect of self-efficacy constructs between intervention allocation and outcome emerged.

**Conclusions:** The application of theory to witness response in stroke identified an important associated psychological factor, recognition self-efficacy. However, the self-efficacy based intervention add-on did not improve correct stroke response or self-efficacy compared to a standard campaign video. Future research should focus on new ways to effectively improve witnesses' self-efficacy to recognise stroke.

12:15 - 12:30

## Identifying micro actions in colorectal cancer screening: a secondary analysis of qualitative data

M. Kotzur<sup>1</sup>, S. Wyke<sup>1</sup>, S. Macdonald<sup>1</sup>, R. Steele<sup>2</sup>, D. Weller<sup>3</sup>, C. Campbell<sup>3</sup>, E. Crighton<sup>4</sup>, C. McCowan<sup>1</sup>, K. Robb<sup>1</sup>

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<sup>4</sup>NHS Greater Glasgow & Clyde, United Kingdom

**Background:** Screening using self-completed faecal occult blood tests (FOBt) can reduce deaths from colorectal cancer (CRC) if the people invited participate. Among women in Scotland, uptake of CRC screening is below 60%. In previous research the practicalities of self-completed CRC screening presented strong barriers to both screening participants and non-participants. Understanding in detail the practicalities and micro actions involved in completing the test can inform future research to improve CRC screening uptake.

**Methods:** This was a secondary analysis of qualitative interviews. Women aged 52 to 64 years who i) had participated (n=21) or ii) had not participated (n=38) in FOBt CRC screening took part in semi-structured interviews. Respondents were purposively sampled to include women from areas of high and low deprivation. Data were analysed using content analysis with reference to the Behaviour Change Techniques (BCT) Taxonomy.

**Findings:** Screening participants described micro actions to progress through 10 steps from receiving the FOBt invitation to receiving the results of their completed FOBt. Action planning and problem solving were the most commonly used BCTs among screening participants to manage the practical (e.g. procrastination) and psychological barriers (e.g. disgust) to doing FOBt. In contrast, non-participants rarely reported action planning or problem solving to do FOBt. Solutions suggested by non-participants focused on social support from health care professionals or friends and family members.

**Discussion:** The findings have implications for screening communication, which could provide more practical advice to support action planning and problem solving to overcome common barriers to colorectal screening uptake.

# Behaviour change: theory informed practice

11:00 - 12:30

McMunn

Rik Crutzen

11:00 - 11:15

## Evolutionary learning processes as the foundation for behaviour change

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<sup>2</sup>Open University of the Netherlands, Netherlands

**Background:** We argue that the active ingredients of behaviour change interventions, often called behaviour change methods (BCMs) or techniques (BCTs), can usefully be placed on a dimension of psychological aggregation.

**Methods:** We introduce evolutionary learning processes (ELPs) as fundamental building blocks that are on a lower level of psychological aggregation than BCMs/BCTs.

**Findings:** A better understanding of ELPs is useful to select the appropriate BCMs/BCTs to target determinants of behaviour, or vice versa, to identify potential determinants targeted by a given BCM/BCT, and to optimally translate them into practical applications.

**Discussion:** Using these insights during intervention development may increase the likelihood of developing effective interventions – both in terms of behaviour change as well as maintenance of behaviour change.

11:15 - 11:30

## Self-managing motivation and behaviour change: Developing a taxonomy and toolkit of self-enactable techniques

K. Knittle<sup>1</sup>, M. Heino<sup>1</sup>, M. Marques<sup>2</sup>, M. Stenius<sup>1</sup>, M. Beattie<sup>1</sup>, F. Ehbrecht<sup>3</sup>, M. Gagné<sup>4</sup>, M. Hagger<sup>5,6</sup>, W. Hardeman<sup>7,8</sup>, N. Hankonen<sup>1</sup>

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<sup>7</sup>University of Cambridge, United Kingdom

<sup>8</sup>University of East Anglia, United Kingdom

**Background:** Behaviour change techniques are the building blocks of behaviour change interventions. Taxonomies often describe behaviour change techniques in terms of what is delivered to an individual, and not as actions an individual can themselves undertake to facilitate behaviour change. This study aimed to develop a taxonomy and toolkit of self-enactable techniques, with which individuals can self-manage their motivation or behaviour across various behavioural domains.

**Methods:** Potentially self-enactable techniques were identified from six existing taxonomies of behaviour change techniques and three scoping reviews in the domains of education, sport, and work. All techniques were re-written and defined in a self-enactable form, and extensive discussions, coupled with feedback from an advisory group, informed decisions to combine techniques across sources. To facilitate use by laypersons, instructive examples of each technique were written, and qualitative interviews with potential end users examined comprehension of these examples. A group of expert intervention developers rated the congruence between technique definitions and instructive examples.

**Findings:** The development process resulted in a preliminary taxonomy of 127 self-enactable techniques. Qualitative interviews contributed to identifying how the instructive examples could be refined to improve ease of use among laypersons. The expert review noted several techniques with an unclear relationship between definitions and instructive examples, which were subsequently improved.

**Discussion:** This taxonomy and toolkit of self-enactable techniques can help laypersons and intervention developers looking for off-the-shelf methods to self-manage motivation and behaviour. Future research will link these techniques with their potential impacts on theoretical determinants of behaviours.

11:30 - 11:45

## Examining the effectiveness of a proximity nudge on food choice with few and many options

L. van Gestel<sup>1</sup>, M. Adriaanse<sup>1</sup>, D. de Ridder<sup>1</sup>

<sup>1</sup>Utrecht University, Netherlands

**Background:** Layman theory suggests that people like to choose: The more choice there is, and the more options there are to choose from, the better it is. However, research on choice overload has shown that more options to choose from can lead to several adverse outcomes: choice paralysis, objectively bad decisions, and decreased satisfaction with the decision. The overload of options may impose cognitive load on the decision maker. Thus, interventions that do not require effortful processing (i.e., nudges) may be especially effective when there are many options rather than few options to choose from.

**Methods:** We conducted two field studies (N = 134, N = 412), in which we presented participants with a variety of chocolates in a 2 (number of options: 3 vs. 9) X 2 (nudge: absent vs. present) between subjects design. In the nudge conditions, one of the options was placed more proximally to the participant.

**Findings:** Across two studies, results showed that the proximity nudge had a significant effect on the likelihood that participants choose the selected piece of chocolate. The odds of choosing this option was approximately twice as high in both nudge conditions compared to the control conditions. This main effect of the nudge was not moderated by the number of options presented.

**Discussion:** The proximity nudge is equally effective with few and many options to choose from. This implies that nudging healthy food choices can be fruitful, possibly even if the healthy option is part of a larger assortment of alternative options.

11:45 - 12:00

## A person-based process evaluation: implementing a digital intervention for hypertension in primary care

K. Morton<sup>1</sup>, K. Bradbury<sup>1</sup>, R. Band<sup>1</sup>, L. Dennison<sup>1</sup>, R. McManus<sup>2</sup>, P. Little<sup>1</sup>, L. Yardley<sup>1,3</sup>

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<sup>2</sup>University of Oxford, United Kingdom

<sup>3</sup>University of Bristol, United Kingdom

**Background:** HOME BP is a digital self-management intervention developed using social cognitive theory to improve poorly controlled blood pressure in Primary Care. This nested process study aimed to explore how healthcare professionals (HCPs) implemented HOME BP within a randomised controlled trial.

**Methods:** A mixed-methods approach used qualitative methods to explore experiences of using the intervention and to interpret quantitative usage data, in line with a person-based approach. Process interviews were conducted with 27 HCPs and analysed using thematic analysis. Adherence to key behaviours (providing remote support and changing patients' medication when recommended) was assessed for all HCPs (n=82).

**Findings:** Four themes were generated describing: beliefs about the concept of the intervention; challenges of supporting patients remotely; reluctance to change blood pressure medication; and fitting the intervention into everyday practice. The quantitative adherence data showed that the majority of nurses adhered to sending support emails to patients, although qualitative findings suggested some would like to be more involved in their patients' care and track their progress online. Most GPs adhered to recommended medication changes, but a few remained reluctant due to concerns about over-medicalisation and a preference for lifestyle change. Some GPs overcame their concerns by speaking to patients when implementing a medication change.

**Discussion:** The findings identified important behavioural challenges for HCPs implementing a digital intervention and possible ways to address these in further implementation. We illustrate how process analysis can be used in the person-based approach to identify specific behavioural issues which can influence intervention adherence and outcomes.



# STATE OF THE ART: Improving the interpretation of research findings

14:00 - 15:30

O'Flaherty

David Hevey

14:00 - 14:45

## Developing MRC guidance: Reducing bias in complex intervention RCTs due to participant reactions to measurement

### State of the Art

D. French<sup>1</sup>, D. Elbourne<sup>2</sup>, A. Farmer<sup>3</sup>, L. Locock<sup>4</sup>, M. Gulliford<sup>5</sup>, J. McCambridge<sup>6</sup>, S. Sutton<sup>7</sup>

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There is now compelling evidence that that measuring people sometimes affects their behaviour and emotional state. This introduces the potential for bias in trials where measurement differentially affects intervention and control groups. There are several routes by which this can happen. For instance, interventions and measurements can interact (e.g. when pedometers promote self-monitoring of behaviour as well as assessing behaviour). Alternatively, measurement may have a main effect on vegetable consumption but a ceiling effect of how much vegetables people are willing to eat could apparently suppressing the effects of an effective intervention. Despite this potential for bias, trial design and conduct has overwhelmingly ignored reactions to measurement as a source of bias. This is no longer a tenable position.

The MRC has commissioned us to produce a set of guidance statements on how best to reduce bias due to measurement in RCTs of interventions to improve health. We have developed a taxonomy of types of reactivity/ measurement effects to structure all subsequent discussions. Ongoing work includes:

- Updating a systematic review of the question-behaviour effect on health-related behaviours.
- Conducting three additional rapid systematic reviews to identify, appraise and synthesise: (a) existing reviews of studies that have quantified the effects of measurement on behaviour and affective outcomes, (b) studies of objective measurements of behaviour on behaviour itself, (c) existing guidance statements on how to reduce bias in trials from measurement reactivity.
- Conducting three online consultations with an international multi-disciplinary group of experts. This will identify the specific topics where guidance is likely to produce the largest benefits.

We will hold a two-day face-to-face international expert consultation meeting to discuss these topics in autumn 2018. The key objective is to produce a set of guidance statements that are supported by the majority of meeting participants on how to reduce this bias in trials.

14:45 - 15:00

## Control group support varies between trials and affects outcomes: A meta-analysis of smoking cessation trials

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**Background:** This study sought to quantify the degree and impact of variability in control group support between behavioural smoking cessation trials. Hypotheses were: higher cessation would be predicted by higher quantity of (a) smoking cessation behaviour change techniques (BCTs), (b) individualised (i.e., tailored/actively delivered) BCTs, (c) adjuvant behaviour (i.e., medication adherence, treatment engagement) BCTs, (d) provision of smoking cessation medication, and (e) interpersonal BCT delivery.

**Methods:** Complete control group data were extracted from 113/143 RCTs (N = 27 249), with adult smokers and biochemically verified cessation at six months or later. Mixed-effects meta-regression analyses examined hypotheses in separate models, while controlling for a-priori identified confounders (analysis plan: [www.osf.io/24pzi](http://www.osf.io/24pzi)).

**Findings:** There was considerable variability in the quantity of BCTs (M=15.52, SD=13.28, range: 0-45), their individualisation (M=2.89, SD=3.80, range: 0-16), and provision of medication (43%). Higher cessation was predicted by (a) more smoking cessation BCTs (B=.02, p<.001), (b) more individualised BCTs (B=.04, p<.05), (c) more treatment engagement (B=.17, p<.05), but not medication adherence (B=-.01, p>.05), BCTs, (d) provision of medication (B=.34, p<.05), and (e) more BCTs delivered interpersonally (B=.02, p<.001). The effect of smoking cessation medication was equivalent to the effects of 17 total BCTs, 8 individualised BCTs, or 5 individualised and interpersonally delivered BCTs.

**Discussion:** The quantity and quality of support delivered to control groups in smoking cessation trials can be substantial and this support determines control group cessation rates. Meta-analyses of smoking cessation trials—and of behavioural trials more generally—should account for control group variability when synthesising effect sizes.

15:00 - 15:15

## Enhancing reproducibility and comprehension of research findings: Transparent communication of quantitative results using modern tools

M. Heino<sup>1</sup>, K. Knittle<sup>1</sup>, A. Haukkala<sup>1</sup>, A. Uutela<sup>1</sup>, V. Araujo Soares<sup>2</sup>, F. Sniehotta<sup>2</sup>, T. Vasankari<sup>3</sup>, R. Sund<sup>1,4</sup>, N. Hankonen<sup>1</sup>

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<sup>4</sup>University of Eastern Finland, Finland

**Background:** Comprehensive reporting of results has traditionally been constrained by limited reporting space. In spite of calls for increased transparency, researchers have had to choose carefully what to report, and what to leave out; choices made based on subjective evaluations of importance. Open data remedies the situation, but privacy concerns and tradition hinder rapid progress. We present novel possibilities for comprehensive representation of data, making use of recent developments in software.

**Methods:** We illustrate the opportunities using the Let's Move It trial baseline data (n=1084). Descriptive statistics and group comparison results on psychosocial correlates of physical activity (PA) and accelerometry-assessed PA were reported in an easily accessible html-supplement, directly created from a combination of analysis code and data using existing tools within R.

**Findings:** Visualisations (e.g. network graphs, combined ridge and diamond plots) enabled presenting large amounts of information in an intelligible format. This bypasses the need to create narrative explanations for all data, or compress nuanced information into simple summary statistics. Providing all analysis code in a readily accessible format further contributed to transparency.

**Discussion:** We demonstrate how researchers can make their extensive analyses and descriptions openly available as website supplements, preferably with abundant visualisation to avoid overwhelming the reader with e.g. large numeric tables. Uptake of such practice could lead to a parallel form of literature, where highly technical and traditionally narrated documents coexist. While we may have to wait for fully open and documented data, comprehensive reporting of results is available to us now.

15:15 - 15:30

## What do they really measure? Examining the content validity of self-efficacy scales

A. Burrell<sup>1</sup>, J. Allan<sup>1</sup>, D.M. Williams<sup>2</sup>, M. Johnston<sup>1</sup>

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<sup>2</sup>Brown University, United States

**Background:** Self-efficacy is often used to explain and predict behaviour. Defined as an individual's assessment of their ability to successfully perform a behaviour, it is measured by questionnaires of self-report. Self-efficacy scales require strong content validity – they must measure the full content and scope of the construct while avoiding contamination from similar psychological constructs. This study uses Discriminant Content Validation – a quantitative, systematic and transparent method, to test the content validity of commonly used self-efficacy scales and qualitatively investigates participants' interpretations of scale items.

**Methods:** Participants (n=21) were shown scale items purporting to measure self-efficacy and similar constructs using standardised DCV methodology. Items were compared to construct definitions to examine if they measured each construct (Yes/No). Participants' confidence these assessments were also obtained (%) to quantitatively establish estimates of content validity for each scale item. A smaller, qualitative think-aloud study then examined participants' judgements of scale items.

**Findings:** 8/8 self-efficacy scale items were found to measure self-efficacy. 2/8 of these items, however, also measured motivation. 6/8 items showed discriminant content validity and thus can be viewed as 'pure' self-efficacy measures. The think-aloud study suggested that wording of items is a possible cause of misinterpretation. Overall findings suggest that item wording in construct measures requires careful consideration during study design to avoid participant misinterpretation and thus poor content validity.

**Keywords:** self-efficacy, discriminant content validity

# Theory testing and development in health behaviour context

14:00 - 15:30

D'Arcy Thomson

Rory O'Connor

14:00 - 14:15

## Are Theory-Based Interventions More Effective Than Non-Theory Based Interventions? A Systematic Review Of Systematic Reviews

S. Dombrowski<sup>1</sup>, R. Dalgetty<sup>1</sup>, C. Miller<sup>1</sup>

<sup>1</sup>University of Stirling, United Kingdom

**Background:** Health interventions grounded in theory may be more effective than those that are not. Our aim was to synthesise all published randomised controlled trial (RCT) meta-analytic evidence from the last decade to determine if theory-driven interventions are linked to more effective behaviour change in adults.

**Methods:** Systematic reviews including meta-analyses were identified by searching Medline, CINAHL, PsycINFO, CDSR and other sources. Only reviews of RCTs of health behaviour interventions with adults aged 18+ published from 2008 onwards were included. A narrative synthesis summarised the evidence.

**Findings:** Of 8,657 articles, 9 systematic reviews met inclusion criteria. Results suggest that there was no association between increased effectiveness for theory-driven compared to non-theory-driven interventions in the majority of systematic reviews. Less than half of RCTs from the reviews reported use of theory (85/183). Results do not suggest an association between increased effectiveness from multiple compared to single-theory interventions. Methodological and reporting issues however limit this conclusion. Two reviews suggested interventions based on Control Theory, Motivational Interviewing, or Self-Determination Theory were associated with greater effectiveness for physical activity and/or dietary interventions and outcomes.

**Discussion:** Interventions grounded in health behaviour theory do not appear to be associated with greater effectiveness than non-theory-driven interventions. Methodological and reporting issues at study and review level may not reflect the true utility of theory use within health behaviour interventions.

14:15 - 14:30

## Do coping plans really help to cope? Exploring relationships between coping plan characteristics and self-efficacy

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**Background:** Individuals with chronic conditions can benefit from formulating coping plans to engage in regular physical activity after rehabilitation. However, the content of coping plans and its link to self-efficacy is rarely adequately evaluated. The aim of this study was to describe the content of user-specified coping plans and to examine whether participants who generate more coping plans (i.e. anticipate more barriers and strategies to overcome them) were more confident in maintaining treatment outcomes and more successful in maintaining activity than individuals with fewer coping plans.

**Methods:** The study presents secondary analyses from a larger internet-based behavioral intervention in cardiac and orthopedic rehabilitation. The content of 551 coping plans from 229 participants was evaluated by two independent raters (i.e. qualitative analyses and ratings of instrumentality of strategies). Self-efficacy was also measured via self-reports at the end of rehabilitation. Regression analyses examined the relationship between number of coping plans, instrumentality and self-efficacy.

**Findings:** On average, participants filled in 2.36 (SD=0.90) coping plans. Overall, participants generated more barriers (M=3.75, SD=1.66) than strategies (M=2.51, SD=1.63). Number of coping plans was neither related to self-efficacy nor physical activity.

**Discussion:** Formulating coping plans, and in particular the anticipation of multiple barriers, does not seem to undermine individuals' perceptions of self-efficacy. The sequence and practical implementation of coping planning as behaviour change technique should be, however, considered in future interventions (e.g. mental simulation vs. written). In the present intervention, coping planning was only introduced at a time point when rehabilitation patients had already had some mastery experience.



14:30 - 14:45

## What predicts the uptake of mindfulness practice in youth? Applying the Reasoned Action Approach

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<sup>2</sup>Folkhälsan Research Center, Finland

**Background:** Poor mental health can impair adolescents' development and future prospects. While mindfulness (MF) practice is a promising method to mitigate and prevent mental health problems, MF practice outside of guided interventions is strikingly infrequent. Better understanding predictors of MF practice behaviours may help improve MF interventions.

We investigated whether the social cognitive factors in the Reasoned Action Approach (descriptive and injunctive norms, outcome expectancies, and self-efficacy through intention) and baseline mental health (resilience, depressive symptoms, and internalisation and externalisation of difficulties) predict uptake of MF.

**Methods:** We analysed data from students aged 12-15 (N=1646) in the MF arm of a large trial, 'Healthy Learning Mind', using path models in Mplus.

**Results:** The descriptive ( $\beta = 0.15$ ,  $p < 0.001$ ) and injunctive norms ( $\beta = 0.06$ ,  $p < 0.001$ ), negative outcome expectancies ( $\beta = -0.05$ ,  $p < 0.001$ ), and positive outcome expectancies ( $\beta = 0.06$ ,  $p < 0.001$ ) predicted practice after the intervention indirectly through intention while self-efficacy ( $\beta = 0.00$ ,  $p = 0.792$ ) did not. Resilience ( $\beta = 0.08$ ,  $p = 0.101$ ), depressive symptoms ( $\beta = 0.02$ ,  $p = 0.661$ ), and externalisation of difficulties ( $\beta = 0.01$ ,  $p = 0.742$ ) did not predict home practice, although internalisation of difficulties ( $\beta = 0.12$ ,  $p = 0.018$ ) had a slight effect.

**Discussion:** Our findings suggest that descriptive and injunctive norms and positive and negative outcome expectancies are potential intervention targets to increase MF practice. Initial mental health should be further investigated to distinguish between the complex ways it could incite or impede uptake.

14:45 - 15:00

## Physical pain sensitivity and suicide risk: the relationship between entrapment and acquired capability for suicide

R. O'Connor<sup>1</sup>, D. O'Connor<sup>2</sup>, R. O'Carroll<sup>3</sup>, E. Ferguson<sup>4</sup>, K. Wetherall<sup>1</sup>, S. Cleare<sup>1</sup>

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<sup>4</sup>University of Nottingham, United Kingdom

**Background:** Although there have been many advances in understanding suicide risk in recent decades, our ability to predict suicide remains limited. As a result, new approaches to understanding this complex phenomenon are required. For the first time, within the context of the integrated motivational-volitional model of suicidal behaviour (O'Connor, 2011), we investigated whether actual physical pain sensitivity (a key suicide risk factor) varies as a function of self-reported entrapment and acquired capability for suicide.

**Methods:** 200 participants with different suicidal histories (with a history of previous suicidal attempt, suicidal ideation or no suicidal history) were recruited. Participants completed background questionnaires, including measures of suicidal ideation, depression, entrapment and acquired capability before completing a task that involved the administration of pressure to the participant's hand via an algometer. The algometer yields an index of physical pain threshold and tolerance.

**Findings:** In the sample as whole, multivariate analyses (ANOVA) revealed that the highest levels of physical pain tolerance (on the algometer) were found among those participants who reported high levels of entrapment and high levels of acquired capability for suicide (predominantly fearlessness about death). These effects remained significant even after controlling for baseline mood, suicidal ideation and suicidal history.

**Discussion:** These findings are consistent with the integrated motivational-volitional model of suicidal behaviour which posits that the interplay between motivational (entrapment) and volitional (acquired capability) phase variables determine suicide risk. Overwhelming emotional pain (entrapment) may facilitate increased physical pain tolerance and, as a consequence, suicide risk. Theoretical and clinical implications will be discussed.

15:00 - 15:15

## An application of the theory of planned behaviour to help-seeking in adults with depressive symptoms

S. Tomczyk<sup>1</sup>, S. Stolzenburg<sup>2</sup>, G. Schomerus<sup>2</sup>, H. Muehlan<sup>1</sup>, S. Schmidt<sup>1</sup>

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<sup>2</sup>Universitätsmedizin Greifswald, Germany

**Background:** To examine socio-psychological precursors of help-seeking via the theory of planned behaviour (TPB) in a sample of adults with depressive symptoms.

**Methods:** We assessed components of the TPB, help-seeking intentions and behaviour in a longitudinal sample of 188 participants from the general German population (Mage=50.34; SD=16.19; 71% female) between November 2015 and July 2016. Attitudes, subjective norms, and perceived behavioural control (all TPB), help-seeking intentions and sociodemographic covariates like age and gender were assessed at baseline. Help-seeking from mental health professionals was assessed at 3- and 6-month follow-ups. The TPB was examined via path models, controlling for covariates.

**Findings:** Attitudes ( $\beta=0.23$ ), and subjective norms ( $\beta=0.26$ ) predicted intentions ( $R^2=26\%$ ), which in turn predicted help-seeking ( $\beta=0.32$ ;  $R^2=23\%$ ). Perceived behavioural control (self-efficacy, controllability) was associated with intention and behaviour in bivariate regressions, but did not reach significance in the path models.

**Discussion:** The TPB is a tenable model for explaining help-seeking for depressive symptoms in a community sample. However, the role of perceived behavioural control is less clear, as its components self-efficacy and controllability exhibit opposing trends towards help-seeking intention and behaviour, which may have to do with the nature of help-seeking as a more indirect form of health behaviour relying on an external source of help.

15:15 - 15:30

## Influencing factors of risk-taking behaviour in high-risk sports

M. Kopp<sup>1</sup>, M. Niedermeier<sup>2</sup>, A. Frühauf<sup>1</sup>

<sup>1</sup>University of Innsbruck, Austria

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**Background:** High-risk sport participation was seen mainly through a one-dimensional view of sensation seeking but recent research has shown that multidimensional perspectives on motives are needed to understand these specific behaviours. The aim of the present study was to understand a potential variety of risk-taking behaviours when practicing high-risk sports.

**Methods:** Using a qualitative approach, semi-structured interviews were conducted with several highly experienced high-risk sport participants (n=50) including freeride skiers and snowboarders, wingsuit flyers, big wave surfers and alpinists. Analyses were done using MAXQDA software following a code theme approach.

**Findings:** Reported risk-taking behaviour varied, depending on who participants compared themselves with. Taking risks was seen as an inherent part of the activity and thus participants stated to take more deliberate risks than the general population. However, when comparing themselves with other high-risk sport practitioners, most of the participants said that they do not search the risk but try to minimize inherent risks as much as possible. Participants described themselves to have a thoughtful and calculated risk management strategy and experienced changes in risk-taking behaviour through either external or own accidents or close calls.

**Discussion:** Contrary to prior research reports on sensation seeking, experienced high-risk sport participants overall seem not to seek out for risk; moreover, the majority stated that they try to minimize risks based on knowledge and experience. Real and anticipated consequences seem to be important for behavioural changes and should be more emphasised in explaining risk-taking in high-risk sports.

# Behavioural science approaches in implementation and health services research

14:00 - 15:30

Anderson

Jenny McSharry

14:00 - 14:15

## Behavioural determinants of healthcare provider compliance with infection prevention guidelines: systematic review of qualitative literature

L. Clack<sup>1</sup>, F. Lorencatto<sup>2</sup>, J. Bogdanovic<sup>1</sup>, A. Wolfensberger<sup>1</sup>, S. Passerini<sup>1</sup>, T. Manser<sup>3</sup>, H. Sax<sup>1</sup>

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<sup>3</sup>University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

**Introduction:** Despite advances in the field of hospital infection prevention, rates of hospital-acquired infection (HAI) remain in the range of 10% and healthcare provider (HCP) compliance with prevention measures remains low. We undertook a systematic review of qualitative published literature to identify HCPs' reported barriers and enablers to compliance with infection prevention guidelines.

**Methods:** We searched (August 2017) Medline, Embase, Psychinfo, and the Cochrane Central Register of Controlled Trials. Studies were included that used qualitative methods to explore HCPs' reported barriers and enablers to compliance with infection prevention guidelines. Reported barriers and enablers were extracted from included studies as raw data (direct quotations) or author interpretation. Identified barriers/enablers were deductively coded using the Theoretical Domains Framework (TDF). Inductive thematic analyses were conducted to identify relevant themes.

**Results:** We included 30 studies examining compliance with the following guidelines: standard and isolation precautions (e.g. hand hygiene, glove use, isolation precautions, vaccination) and HAI-specific prevention measures. Of the 368 identified barriers/enablers, the most frequent corresponded to the TDF domains: "Environmental Context and Resources" (n=74) [e.g. lack of time, ease of access to materials], "Beliefs about consequences" (n=53) [e.g. self-protection, perceived efficacy of prevention measure] and "Social Influences" (n=53) [e.g. patient influence, role modelling]

**Discussion:** Whereas many infection prevention efforts focus primarily on training and education to increase HCP knowledge and improve practice, our results suggest that other important determinants may be overlooked. Our findings have important implications for guiding the design of future initiatives to address the most prevalent barriers and enablers.

14:15 - 14:30

## Methods to help non-psychologists to identify the health professional behaviours that need to change

L. Byrne-Davis<sup>1</sup>, E. Bull<sup>1</sup>, J. Hart<sup>1</sup>

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**Background:** Interventions to change health professional practice are often led by non-psychologists, e.g., educators and clinical leaders. We explored methods for the identification of healthcare professional behaviours for change.

**Method:** We explored two methods in different projects: Project 1) a continuing professional development course in Tanzania, Nepal, Bangladesh and Zimbabwe; Project 2) a project for teams implementing new care models in the NHS. In Project 1, 15 educators took part in a 3-round Delphi study and pilot. In Project 2, four teams of healthcare professionals from new care model vanguards in North West England took part in 35 interviews, 15 observations and six focus groups.

**Findings:** In Project 1, 36 behaviours were identified. Only one of the 10 behaviours identified by lead faculty, were identified by the wider faculty, who identified 15 different behaviours. Psychologists observing the course delivered, noted that only 8 of the behaviours identified in the process were a focus of the education; six behaviours not identified were. In Project 2, teams identified 37 changes in total but many were not behaviours e.g., 'awareness of...'. A process of facilitated focus groups enabled teams to generate agreed specific behaviours for change.

**Discussion:** Non-psychologists found it hard to identify behaviours, often identifying determinants of behaviour. Existing interventions have many behaviours and teams do not always agree with each other about the behaviours for change. Methods involving face to face interaction were more time consuming but led to agreement on behaviours, which avoided disagreements later in the projects.

14:30 - 14:45

## Barriers/enablers to implementing guidance: a theory-based study, investigating healthcare-professional behaviours around prompt urinary catheter removal

R. Bhardwaj-Gosling<sup>1,2</sup>, S. Potthoff<sup>1,3</sup>, F. Sniehotta<sup>1</sup>, C. Harding<sup>2</sup>, C. Abley<sup>1,2</sup>, S. Hrisos<sup>1</sup>, J. Presseau<sup>4</sup>

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**Background:** Combating catheter-associated urinary tract infections (CAUTIs) is a priority in the worldwide drive to reduce hospital-acquired infections. Minimising catheter duration is an effective method of reducing CAUTIs but current median duration of postoperative catheters (3days) remains higher than the recommended one-day standard (CDC-guidelines). A theory-based approach to understanding factors that influence the implementation of catheter removal guidance may help develop effective interventions to reduce CAUTIs. This study aimed to identify theory-based predictors of guideline-recommended healthcare professional (HCP) behaviour (conducting daily catheter removal assessments) to prompt catheter removal.

**Methods:** Prospective correlational design involving HCPs from 11 medical and 13 surgical in-patient wards in North-East England, UK. HCPs (n=141) from nursing/medical backgrounds involved in catheter care completed a Theoretical Domains Framework (TDF) based questionnaire at baseline and self-reported their catheter-removal behaviours at two-week follow-up. Following mapping of TDF domains to constructs of Social Cognitive Theory (SCT), social support and habit, we assessed predictors of HCP intention and behaviour.

**Findings:** With 96% response rate, SCT constructs self-efficacy (MEAN=4.37,SD=1.41), outcome expectations (MEAN=5.85,SD=1.16) and social support (MEAN=3.64,SD=1.46) accounted for large amount of variance in HCPs intention (MEAN=5.10,SD=1.54,R2adj=0.55) and with addition of habit (MEAN=4.16,SD=1.83) accounted for medium amount of variance in prediction of HCP behaviour (MEAN=1.31,SD=1.06,R2adj=0.20) to conducting daily assessments.

**Discussion:** HCPs are moderately motivated to perform catheter removal assessments. However, variance in behaviour shows room for improvement. Future interventions targeting intention, social support and habit may prove successful to modify clinical behaviours for prompt catheter removal to reduce CAUTIs and variance in HCP behaviour



14:45 - 15:00

## A feasibility study using the Behaviour Change Wheel with healthcare teams in organisations implementing change

E. Bull<sup>1</sup>, J. Hart<sup>1</sup>, L. Byrne-Davis<sup>1</sup>

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**Background:** Organisational change in health requires individuals and teams to change practice behaviours. The Behaviour Change Wheel (BCW) is an evidence-based guide to designing behaviour change interventions. This study investigated the feasibility of applying the BCW with teams involved in major changes to care delivery.

**Methods:** In an organisational participatory research design, individuals from a) an academic health psychology centre, b) Health Education England c) health provider sites, worked as partners. Sites were developing new models of care in their region e.g. reorganising care pathways. They identified teams struggling with change: the BCW was applied. Qualitative feasibility data were collected from 50 interviews, 6 focus groups, 2 team away days and email correspondence over the 18-month study. Field notes and verbatim transcripts were analysed thematically.

**Findings:** Seventy-six participants from four sites took part in the participatory research: 8 leaders and 68 multi-disciplinary team members from cardiac, midwifery, psychiatry and paediatric specialties. BCW interventions were developed with three teams, implemented with two teams. Twelve behaviour change techniques were proposed e.g. behavioural experiments, through four intervention functions, to address capability, opportunity and motivation barriers. Four feasibility themes emerged as important: 1) co-development with teams, 2) support from engaged leaders 3) higher acceptability of qualitative over quantitative exploration data, 4) importance of five steps: identifying, exploring, deciding, implementing, evaluating.

**Discussion:** The BCW was applicable to large-scale organisational healthcare change. For complex, multi-layered change, the BCW may be optimised by co-development with teams and leaders and by ensuring a focus on implementation and evaluation.

15:00 - 15:15

## Using the Behaviour Change Wheel to develop a behavioural intervention to target pre-operative alcohol consumption

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**Background:** Increased alcohol consumption prior to surgery increases the risk of postoperative complications. Preoperative assessment offers the opportunity to screen and intervene to address alcohol consumption. Preoperative nursing staff already assess alcohol consumption but do not employ a validated screening tool and are rarely trained in intervention delivery. The aim was to develop a training intervention to enable pre-operative nurses to deliver screening and brief behavioural intervention targeting preoperative alcohol consumption.

**Methods:** The Behaviour Change Wheel (BCW) was used to develop the intervention. Behavioural analysis using the COM-B Self-Evaluation Questionnaire assessed the determinants of delivering screening and brief intervention for risky drinking. A purposive sample of nurses (n=12) reported their needs in terms of their capabilities, opportunities and motivation to screen and deliver a brief intervention. An iterative approach was then adopted to develop the training intervention. Nurses' delivery of the intervention was audio recorded (n=7) and fidelity of delivery assessed independently by two coders.

**Findings:** A 2-hour face-to-face group training intervention was developed. Ten behaviour change techniques were incorporated to target nurses' capability, opportunity and motivation to deliver the screening and brief behavioural intervention. Nurses rated the training satisfactory but requested additional support. Fidelity of delivery of the intervention rated low to moderate with acceptable level of inter-rater reliability between coders.

**Discussion:** While the BCW provides a pragmatic framework to develop a behavioural training intervention, additional training and support was identified as necessary to increase fidelity of delivery. The outcome of this research facilitated optimisation of the training intervention.

15:15 - 15:30

## Exploring a method for using The Behaviour Change Technique Taxonomy to live code education interventions

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**Background:** Health professional education is often an intervention to change practice, but the behaviour change content is rarely systematically studied. Educators report that behavioural science is inaccessible. Current taxonomies of behaviour change techniques (BCTs) are lengthy and may need adjustment to be useful to educators. We aimed to develop and refine an application of the BCT taxonomy (v1), with relevant examples, which health professional educators could use to assess the content of their courses.

**Methods:** Two psychologists observed three medical CPD courses over 7 days. The BCT taxonomy (v1) was used to live-code BCTs; inter-rater reliability was assessed. A pilot e-tool contained observed BCTs with relevant examples. Six behaviour change consultants commented on its comprehensiveness and suggested revisions. Three psychologists then formally rated examples (20% were double-rated) regarding accuracy, clarity, distinctiveness from other BCTs and generalisability to other behaviours. The tool was subsequently refined.

**Findings:** Live coding inter-rater agreement was high (Cohen's Kappa 0.75-0.89; PABAK 0.81-0.92). Forty-one BCTs were coded by at least one observer; behaviour change consultants suggested two more to enhance comprehensiveness. The pilot e-tool contained 43 BCTs with 86 examples. Thirty-seven examples were altered following recommendations; raters subsequently judged that 63/86 met all four example criteria (inter-rater agreement was 92%). The final e-tool contains 43 BCTs and 72 examples.

**Discussion:** A training version of the BCT taxonomy (v1) was systematically developed and refined to assist educators in understanding behaviour change content of education. The e-tool should now be piloted by non-psychologist health professional educators in other courses.

# Chronic disease in young people

14:00 - 15:30

Kirwan

Caroline Heary

14:00 - 14:15

## Uncertainties tied to developmental tasks among young adults with hematologic malignancies: An abductive, qualitative analysis

A. Panjwani<sup>1,2</sup>, A. Marin-Chollom<sup>3</sup>, I. Pervil<sup>1</sup>, J. Erbllich<sup>1,2</sup>, L. Rubin<sup>4</sup>, M. Schuster<sup>5</sup>, T. Revenson<sup>6</sup>

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**Background:** Cancer in young adulthood is an “off-time” event in the normative adult life cycle. This is a period of building autonomy, identity, and intimate relationships – how does one achieve these tasks while living with cancer? Previous cancer research on illness uncertainty has focused primarily on medical concerns, such as fear of recurrence or mortality. The current study identifies how YA survivors of hematologic malignancies, an understudied group, experience illness uncertainties tied to developmental tasks of young adulthood

**Methods:** This is a qualitative study of 53 young adult (YA) hematologic cancer survivors, ages 20-39. Participants completed hour-long interviews about various aspects of their cancer experience. Interviews were transcribed and coded using an abductive approach to qualitative analysis. This approach combines inductive and deductive reasoning in an iterative process, allowing for systematic combining of existing theories with insights from participants' interviews.

**Findings:** Most participants (80%) spontaneously described at least one illness uncertainty. Fertility was the most commonly reported type of uncertainty (55%), with more women than men reporting it, followed by family and intimate relationships (43%), peers and social life (36%), and academic or career goals (26%). The off-time nature of illness is evident in each of these categories.

**Discussion:** The findings of the current study advance our understanding of the illness experience of YA survivors. A cancer diagnosis can disrupt the achievement of normative, developmental tasks. A more inclusive conceptualization of illness uncertainty has the potential to inform psychosocial interventions with regards to fertility preservations and other age-specific concerns.

14:15 - 14:30

## The impact of the relapsing-remitting cycle in eczema in young people: a secondary qualitative analysis

I. Muller<sup>1</sup>, D. Ghio<sup>1</sup>, K. Greenwell<sup>1</sup>, M. Santer<sup>1</sup>

<sup>1</sup>University of Southampton, United Kingdom

**Background:** Eczema is a very common inflammatory skin condition, affecting more than 1 in 5 children and causing significant impact on quality of life. A popular belief is the concept of children 'outgrowing eczema', although for many the condition will follow a chronic relapsing and remitting course throughout their life and it's unclear how the cyclical nature impacts self-management of eczema.

**Methods:** Secondary inductive thematic analysis on transcripts of interviews originally carried out by HealthTalk.org. A total of 23 interviews with young people with eczema were included in this analysis. Participants were mostly female (17 females and 6 males) ranging from 17 to 25 years old. A coding schedule was iteratively developed through team discussions of emerging data.

**Findings:** Participants identified eczema as a chronic relapsing-recurring condition that was cyclical, often triggered by stressful events. Routine was a facilitator in managing the condition alongside dealing with the flare-ups. The cyclical nature of the condition had a high impact on self-management including challenging the trial and error process of identifying triggers and finding successful routines. Accepting that eczema is a long-term condition had substantial psychosocial impact. Some appeared to respond by adjusting their beliefs about treatment control instead of treatment cure.

**Discussion:** Experiences contradict the popular belief that children out-grow eczema. This had implications for acceptance of the condition and attitudes to self-management. These findings highlight the need for managing expectations about the prognosis of eczema and changing the focus of the treatment from cure to control.

14:30 - 14:45

## Irish children and teachers' insights on proactively supporting primary school children with Juvenile Idiopathic Arthritis.

S. O'Higgins<sup>1</sup>, N. Gately<sup>1</sup>, B. Slattery<sup>1</sup>, C. Dwyer<sup>1</sup>, L. O'Connor<sup>1</sup>, M. Hanlon<sup>1</sup>, S. Haugh<sup>1</sup>, B. McGuire<sup>1</sup>

<sup>1</sup>National University of Ireland Galway, Ireland

**Background:** Longitudinal study, Prime-C, found 1 in 10 Irish children aged 5-12 live with chronic pain (CP). As a result, these children go through a number of experiences differentiating them from children without pain, ranging from practical implications, such as absence from school and difficulty with writing, to psychological implications, including fear and social isolation.

Findings indicated general lack of awareness about these children's experiences; and how teachers deal with pupils who complain of pain may not be adaptive.

The aim of this knowledge exchange project, was to work participatively with children living with CP, to gain understanding of what their life is like and explore their ideas on how adults could proactively support their "being part of school".

**Methods:** Researchers invited children with Juvenile Idiopathic Arthritis (JIA), aged 5-12, to Participative Health Research workshops to share their experiences and ideas about how to make life with JIA more manageable.

**Results:** Children with JIA identified that being part of school was vital for their well-being; and went on to make videos of how pain affected them.

A cumulative video was developed using both the children's footage and input from experts, including a clinical nurse specialist, psychologist and physiotherapist to raise awareness among the public.

This video was shared with teachers, to increase knowledge of children's issues and solutions; and explore how teachers could proactively ensure children with CP are not excluded from school.

The presentation will share the background, participative processes, and subsequent guidelines developed by teachers for teachers.

14:45 - 15:00

## Online pain management for pre-adolescent children: Participative research meaningfully informs intervention design and development.

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<sup>1</sup>National University of Ireland Galway, Ireland

<sup>2</sup>Centre for Pain Research, National University of Ireland Galway, Ireland

**Objective:** Research in paediatric pain management and online intervention development has largely focused on adolescents with chronic pain. This paper describes the participative, person-based approach used to develop a web-based intervention (Feeling Better) designed to enhance adaptive coping in pre-adolescent children with chronic pain.

**Method(s):** A mixed methods, multi-phased approach was used to give children with chronic pain (5-12 years) a voice in the development of cognitive behavioural therapy intervention tailored to their support needs and preferences. Children with chronic pain and their parents contributed to each iteration of the online programme via (i) think-aloud methods (ii) participative research process workshops and (iii) remote user-testing. The success of this approach was tested in a feasibility randomised controlled trial.

**Results and Conclusions:** A list of intervention components most likely to engage pre-adolescent children with chronic pain was generated and incorporated in the online Feeling Better intervention. Children and parents described feeling empowered by their involvement in the development process. The online programme was shown to be feasible and acceptable to children (ages 5-12 years) with mixed chronic pain conditions. Engagement in the online programme was relatively high with 74% (n=26) of children in the Internet group (n=35) completing 5 or more treatment sessions. Statistically significant improvement was observed for those in the Internet group on measures of overall quality of life, self-efficacy for coping despite pain, pain catastrophising and use of coping strategies. Thus, giving school-age children a voice in their own pain management may be a mutually beneficial treatment approach.



15:00 - 15:15

## Investigating the feasibility and acceptability of a psychosocial intervention for adolescents with type 1 diabetes

C. Heary<sup>1</sup>, K. Farrell<sup>1</sup>, C. Crowe<sup>2</sup>, C. McDonnell<sup>2</sup>, A. O' Neill<sup>2</sup>, L. Hynes<sup>3</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>Tallaght Hospital, Ireland

<sup>3</sup>West Virginia University, United States

**Background:** Deteriorating glycemic control is a common event for adolescents with type 1 diabetes (T1D), as adolescents face many challenges in managing their condition during this stage of life. This pilot study aimed to investigate the feasibility and acceptability of a psychosocial intervention for adolescents with type 1 diabetes.

**Method:** Using a mixed method approach, eleven participants aged 16-18 years engaged in a six-week psychosocial intervention called STAND (Support Through Art and Networking in Diabetes), and completed psychological measures at two time points (pre and post-intervention). Qualitative phone interviews were conducted with participants and service providers (N=2) who delivered the intervention to gather feedback on the feasibility and acceptability of the intervention.

**Findings:** Based on the qualitative findings, the intervention was found to be an acceptable and feasible group programme. The themes identified included: having a complete support network (shared understandings; development of friendships amongst participants), the benefits of the social media group to support and complement the formal clinical work, and general reflections on the STAND programme (such as perceptions of the programme as encouraging and supportive & suggestions for improvement). Overall, both the service providers and adolescents described the weekly group sessions as a positive experience, which supported and motivated them towards improving their diabetes management.

**Discussion:** The findings demonstrated the potential for future psychosocial group programs for adolescents who are struggling with the challenges of T1D.

# Stress and health behaviours

14:00 - 15:30

Larmor

AnnMarie Groarke

14:00 - 14:15

## Understanding social disadvantage and smoking through the experience of daily stress

T. Jahnel<sup>1</sup>, S. Ferguson<sup>1</sup>, S. Shiffman<sup>2</sup>, B. Schüz<sup>1,3</sup>

<sup>1</sup>University of Tasmania, Australia

<sup>2</sup>University of Pittsburgh, United States

<sup>3</sup>University of Bremen, Germany

**Introduction:** There is a well-established social gradient in smoking- those who are more disadvantaged smoke more. However, much less is known about the underlying behavioural mechanisms. Here, we take a social-ecological perspective by examining daily stress experience as a process linking social disadvantage to smoking behaviour.

**Method:** For an intensive longitudinal study 194 daily smokers recorded their smoking and daily stress levels for three weeks using an electronic diary. We tested whether socioeconomic disadvantage (educational attainment, income, race) exerts indirect effects on smoking (cigarettes smoked per day) via smoker's experience of daily stress. Data were analysed using hierarchical random effects regression with a lower level mediation model (2-1-1 mediation).

**Results:** Lower educated and African American smokers perceived significantly more daily stress ( $B=8.417$ ,  $p < .01$ ;  $B= 6.951$ ,  $p < .001$ ) which in turn was a significant predictor of smoking ( $B=0.014$ ,  $p < .001$ ). This resulted in a significant indirect effect of racial background ( $B= 0.096$ ,  $p < .05$ ) and education ( $B=0.115$ ,  $p < .05$ ) via perceived daily stress on CPD. No indirect effects were found for income.

**Implications:** These findings suggest that socioeconomic disadvantage is associated with smoking at least partially via differential experience of daily stress, with socially disadvantaged smokers experiencing more daily stress. Interventions focusing on individual's life circumstances that induce daily stress might help to reduce the effect of social disadvantage on the experience of stress, which ultimately might lead to a reduction in smoking behaviour, in particular among socially disadvantaged groups.

14:15 - 14:30

## The effects of elicited emotions on physiological responses and communication in romantic couples

L. Kaczmarek<sup>1</sup>, T. Kashdan<sup>2</sup>, M. Behnke<sup>1</sup>, J. Enko<sup>1</sup>, M. Dziekan<sup>1</sup>, M. Kosakowski<sup>1</sup>, P. Guzik<sup>3</sup>

<sup>1</sup>Adam Mickiewicz University, Poland

<sup>2</sup>George Mason University, United States

<sup>3</sup>Poznan University of Medical Science, Poland

Positive affect promotes lower heart rate (HR) reactivity and facilitates prosociality (the broaden-and-build theory of positive emotions). We aimed to integrate the health and social perspective and observe how positive emotions influence physiological responses and whether, in turn, these physiological responses influence communication among partners while sharing their accomplishments (the capitalization theory). Building upon prior research on positive emotions, physical health, and social communication, we expected that positive emotions would promote lower HR reactivity and more constructive responses to capitalization attempts.

In a laboratory, 107 participants assisted their romantic partner who was solving difficult tasks. First, participants (supporters) watched validated 2-minute positive, negative, or neutral video clips. Next, they received bogus information that their partner was successful. Finally, they sent a pre-defined and validated message selected from a range from highly destructive (demeaning the success) to highly constructive (full appreciation of the success). Heart rate was recorded continuously at 1000 Hz with a Powerlab A/D converter.

Positive emotions promoted lower HR reactivity,  $b=-1.18$ ,  $p<.05$ . Higher HR reactivity predicted more frequent destructive communication,  $b=.16$ ,  $p<.01$ , and less frequent positive-constructive responses,  $b=-.10$ ,  $p<.05$ . Positive emotions had an indirect inhibiting effect on destructive communication via lower HR reactivity,  $b=-0.18$ , 95%CI[-.54,-.01], and a facilitating effect via HR reactivity on active-constructive responses,  $b=0.12$ , 95%CI[.01,.32]. In conclusion, Individuals who experience positive emotions are at a lower risk of health problems and social difficulties, and these two benefits of positive affect operate together. These findings lend further support for the broaden-and-build theory of positive emotions.

14:30 - 14:45

## Self-compassion and psycho-physiological recovery from recalled sport failure

L. Ceccarelli<sup>1</sup>, S. Strachan<sup>1</sup>

<sup>1</sup>University of Manitoba, Canada

Failure inherent to high-performance sport can precipitate emotional distress that can impair athletes' performance and physical and mental health. Identifying factors that allow athletes to manage failure to sustain their health is critical. Self-compassion (SC), treating oneself kindly in response to failure, buffers against negative affective responses. Whether SC impacts physiological responses to failure among athletes is unknown. The purpose of this study was to examine the influence of SC on athletes' psychological reactivity and physiological recovery when recalling a sport failure. Participants (n=91; M age=21) were university or national-level athletes. In this laboratory-based, observational study, athletes were connected to a multi-modal biofeedback system to measure physiological responding at baseline, during a stress induction (imagining a past performance failure), and during a recovery period. Physiological recovery was assessed according to athletes' heart rate variability (SDNN) during the recovery phase, relative to baseline scores. Next, to assess psychological reactivity, athletes completed a series of scales (behavioural reactions, thoughts, and emotions). Regression analyses revealed that SC predicted adaptive behavioural reactions ( $\beta = .46, p < .01$ ), and negatively predicted maladaptive thoughts ( $\beta = -.34, p < .01$ ) and negative affect ( $\beta = -.39, p < .01$ ). Further, SC predicted athletes' heart rate variability during the recovery phase, relative to their baseline scores ( $\beta = .37, p < .01$ ). Results suggest that SC promotes adaptive physiological and psychological responses in athletes relative to a recalled sport failure and may have implications for performance enhancement, recovery and health outcomes.

14:45 - 15:00

## Does listening to music support coping with induced stress? Comparing self-chosen and research-chosen music

A. Groarke<sup>1</sup>, J. Groarke<sup>1</sup>, M. Hogan<sup>1</sup>, L. Costello<sup>1</sup>, D. Lynch<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** This paper describes two studies that examine the affect regulating effects of music, aiming to extend the scope of previous research using researcher-chosen music and silent control conditions.

**Method:** In Study 1, 70 students (18–27 years,  $M = 20.50$ ,  $SD = 4.95$ ) were randomly assigned to one of three conditions: researcher-chosen music, self-chosen music or silent control condition. In Study 2, 75 students (17-34 years,  $M = 20.23$ ,  $SD = 3.15$ ) were randomly assigned to researcher-chosen music, self-chosen music, or an active control (listening to a radio show).

Negative affect (NA) was induced using the Trier Social Stress Test, followed by 10 minutes of music listening (self-chosen versus researcher-chosen) or control (silent or active). Self-reported anxiety, Heart Rate (HR) and Blood Pressure (BP) were measured at baseline, post-induction, and post-intervention.

**Findings:** A 3 x 3 Mixed ANOVA found those who listened to music (self and researcher-chosen) reported significantly greater anxiety reduction than participants in a silent control. Results also indicated that self-reported anxiety reduction was greatest in the self-selected music condition, but researcher-chosen music was found to be more effective at reducing physiological arousal (i.e., HR) than silence. Results were not replicated in Study 2 when music was compared against an active control condition.

**Discussion:** These findings suggest that music may provide a cost-effective and easily applied means of emotion regulation in preparing for stressful events, such as awaiting medical procedures. Yet, the results of Study 2 indicate other activities that provide distraction may have similar benefits.

15:00 - 15:15

## Evaluation of the German Version of the Stress and Adversity Inventory for Adults (Adult STRAIN)

S.C. Sturmbauer<sup>1</sup>, E.L. Hetzel<sup>1</sup>, G.S. Shields<sup>2</sup>, G.M. Slavich<sup>3</sup>, N. Rohleder<sup>1</sup>

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<sup>2</sup>University of California, Davis, United States

<sup>3</sup>University of California, Los Angeles, United States

**Background:** Acute and chronic stress has long been identified as a determinant of adverse health outcomes, but few assessment tools covered the entire lifespan and a large variety of stressors. The Stress and Adversity Inventory for Adults (STRAIN) has been developed as an online tool to assess exposure to stressors occurring over the life course. Here, we present results of a first evaluation of our German translation.

**Methods:** STRAIN differentiates between acute and chronic stressors, and measures the frequency, severity, timing, and duration of each stressor reported. After translating the STRAIN, we conducted an online survey of 298 individuals (81 men, 217 women) with a mean age of 30.3 years to validate the German version. Participants completed the STRAIN, the Adverse Childhood Experiences Questionnaire (ACE) and the State-Trait Anxiety Inventory (STAI), and other self-report-measures.

**Results:** The convergent validity of the STRAIN was supported by significant correlations of total number of stressors, and perceived severity, with the ACE (total number:  $r=.52$ ,  $p<.001$ ; perceived severity:  $r=.55$ ,  $p<.001$ ). Effect sizes ranged between  $d=0.77$  and  $d=1.50$ . For Anxiety, we found that total number of stressors was associated with state anxiety ( $R^2=.22$ ,  $p<.001$ ,  $b=0.198$ ), whereas perceived severity was associated with state as well trait anxiety ( $R^2=.23$ ,  $p<.001$ , state:  $b=0.166$ , trait:  $b=0.207$ ).

**Conclusions:** Our results provide a first indication that the German version of the STRAIN is a valid instrument to assess a person's exposure to stress over the life course. Future studies will test whether the STRAIN predicts maladaptive stress responses and general health outcomes.

# Individual differences in coping with chronic illnesses and syndromes

14:00 - 15:30

Dillon

Heike Spaderna



14:00 - 14:15

## Personality functioning in adolescents and emerging adults with type 1 diabetes: A longitudinal approach

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<sup>4</sup>Institute of Health and Care Sciences, University of Gothenburg, Gothenburg, Sweden

**Background:** Although prior research has stressed the role of personality in understanding diabetes-specific functioning, longitudinal research is lacking. The objectives of the present study were twofold: (1) to chart the development of patients' personality over a 2-year period; and (2) to examine prospective associations between personality and diabetes-specific functioning.

**Methods:** Adolescents and emerging adults with type 1 diabetes, aged 14 to 25 (Mage=18.86 years, 54% female), participated in a 3-wave longitudinal study spanning 2 years (n=560 at Time 1). Patients filled out questionnaires on Big Five personality traits, treatment adherence, and diabetes-specific distress. HbA1c-values were obtained from treating physicians. We used latent growth curve modeling to examine the development of patients' personality. Cross-lagged path analysis was performed to examine prospective associations among the study variables.

**Findings:** First, we observed mean-level increases in extraversion, agreeableness, and conscientiousness over the course of the study. Second, we uncovered bidirectional associations between personality and diabetes-specific functioning. Lower conscientiousness and higher extraversion predicted a relative decrease in treatment adherence one year later. Poorer treatment adherence, in turn, predicted relative decreases in conscientiousness and agreeableness over time. Furthermore, lower emotional stability predicted a relative increase in distress one year later. Higher distress, in turn, predicted relative decreases in emotional stability and agreeableness over time. Finally, lower conscientiousness predicted poorer glycemic control one year later.

**Discussion:** This study found adolescents and emerging adults with type 1 diabetes to move toward a more mature personality and underscores the importance of personality for diabetes-specific functioning.

14:15 - 14:30

## Relationship between time perspective and self-monitoring of blood glucose among people with type 1 diabetes

H.M. Baird<sup>1</sup>, T.L. Webb<sup>1</sup>, J. Martin<sup>1</sup>, F.M. Sirois<sup>1</sup>

<sup>1</sup>University of Sheffield, United Kingdom

**Background:** Self-monitoring of blood glucose helps people with type 1 diabetes to maintain glycaemic control and reduce the risk of complications. However, like many health behaviours, self-monitoring of blood glucose involves overcoming immediate costs (e.g., effort and negative feelings) in order to achieve future benefits. The present research explored whether individual differences in time perspective – specifically, the extent to which people have a balanced time perspective – are associated with the frequency with which people with type 1 diabetes monitor their blood glucose and, thus, maintain glycaemic control.

**Methods:** A sample of 183 adults with type 1 diabetes completed measures of time perspective, feelings associated with monitoring, attitudes toward monitoring, and trait self-control. Objective data regarding the frequency with which participants monitored their blood glucose and their long-term glycaemic control was extracted from their medical records. Data were analysed using hierarchical regression and mediation analyses.

**Findings:** The findings indicated that having a more balanced time perspective was associated with more frequent monitoring of blood glucose ( $b = 5.119$ ,  $p = .004$ ), and as a result, better glycaemic control ( $b = -0.204$ ,  $p = .034$ ). Further mediation analyses suggested that the relationship between balanced time perspective and monitoring of blood glucose was explained by the feelings that participants associated with monitoring and their subsequent attitudes toward monitoring.

**Discussion:** These findings point to the importance and relevance of time perspective for understanding health-related behaviour and may help to develop interventions to promote self-monitoring of blood glucose in people with type 1 diabetes.

14:30 - 14:45

## The role of psychosocial factors on the relapse of Crohn disease

A. Lainé<sup>1,2</sup>, A. Laurent<sup>1,2</sup>, A. Mariage<sup>1,2</sup>, S. Nancey<sup>3</sup>, B. Flourié<sup>3</sup>

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<sup>2</sup>Laboratoire de Psychologie EA3188, France

<sup>3</sup>CHU Lyon Sud, France

Crohn's disease is characterized by chronic bowel inflammation and affects 2.2 million people in Europe. Several studies show the impact of psychosocial factors on relapse without reaching a consensus. The objective of our study is to define the psychosocial factors that could influence the activity of the disease.

We conducted a longitudinal, prospective and multicentre study on 98 adults in remission, over 1 year. We assessed their level of stress (Pss10, Pcl-S, Hassles, Machrostresser), psychological distress (Scl-90r, Ghq12), social support (Ssq6, Enrichd), coping (Wcc), and quality of life (Whoqol-bref, Ibdq) using generic and specific questionnaires. The predictive factors were determined from the odds ratio calculation.

The results suggest that subjects with high levels of disease-specific stress related to physical repercussions (OR = 4.5, 95% CI: 1.55-171.47) and decreases in social resources were more likely to relapse (OR = 5.22, 95% CI: 1.13-20.33). A low quality of life specific to symptoms is also predictive of relapse (OR = 3.8, 95% CI: 1.19-12.64) like the preferred use of emotional-focused coping (OR = 5.84; 95% CI: 1.56- 21, 88), in contrast to psychological distress and perceived social support.

Stress and quality of life specific to chronic disease increased risk of relapse of Crohn disease, like emotional-focused coping. We suppose that predictive factors should be explain by the existence of vulnerability factors oriented on the representations and the illness experience. Patients' psychological support must be focused on these factors to anticipate relapse of Crohn disease.

14:45 - 15:00

## Association between psychiatric disorders and vulnerability to stress-related asthma attacks

C. Gemme<sup>1,2</sup>, S.L. Bacon<sup>2,3</sup>, A.I. Dragomir<sup>1,2</sup>, K.L. Lavoie<sup>1,2</sup>

<sup>1</sup>Université du Québec à Montréal, Canada

<sup>2</sup>Montreal Behavioural Medicine Centre, Canada

<sup>3</sup>Concordia University, Canada

**Background:** Psychiatric disorders (e.g. depressive and anxiety disorders) are common in patients with asthma and linked to worse asthma control. Understanding whether patients with psychiatric disorders are more vulnerable to “stress-related” asthma exacerbations may help explain part of the mechanism for poorer control. This study explored associations between psychiatric disorders and a tendency to experience “stress-related” asthma attacks in adults with asthma.

**Methods:** A total of 797 adults with physician-diagnosed asthma participating in the Psychosocial and Behavioural Risk Factors for Asthma Longitudinal (PAL) study underwent medical, psychiatric (PRIME-MD) and socio-demographic interviews at baseline. Odds Ratios were calculated to assess the relationship between psychiatric disorders (mood, anxiety) and reporting stress as an asthma trigger, with age, sex and asthma control (ACQ score) as covariates.

**Findings:** Significant main effects of mood (OR= 2.1, 95% CIs:1.3–3.3) and anxiety (OR 2.3, 95% CI:1.5–3.7) disorders on the likelihood of reporting stress as a trigger of asthma exacerbations were observed. Having comorbid mood and anxiety disorders was also related to a 4.6-fold increase (OR= 4.6, 95% CIs:2.5–8.6) in the likelihood of reporting stress as a trigger.

**Discussion:** Findings suggest that mood and anxiety disorders alone and in combination may increase susceptibility to stress-induced asthma attacks. These findings highlight the need for further studies examining explanatory mechanisms including autonomic arousal and bronchoconstriction and to determine if stress-management interventions in this population could improve outcomes.

15:00 - 15:15

## Cognitive Bias Modification to relieve fatigue symptoms: preliminary results from a self-identity fatigue IAT

M. Pieterse<sup>1</sup>, C. Bode<sup>1</sup>

<sup>1</sup>University of Twente, Netherlands

**Background:** Fatigue is a common and invalidating symptom in chronic diseases. Recent studies suggest that fatigue may be perpetuated by associative processes, such as attentional bias. Based on Pincus' Schema Enmeshment Model for pain, we hypothesized that frequent fatigue experiences lead to a self-as-fatigued identity bias, which in turn might drive perceptions and avoidance behaviors that perpetuate symptoms. Emerging evidence shows that such cognitive biases may be mitigated through Cognitive Bias Modification (CBM). In four studies we validated a Self-Identity IAT (SI-IAT) to measure a bias towards fatigue, and tested an IAT-based CBM to retrain fatigue bias towards vitality.

**Methods:** In two cross-sectional studies among volunteers with varying fatigue (N=30/84), the SI-IAT was validated by correlating IAT D-scores with self-reported fatigue (CIS) and vitality (SVS). Immediate effect of a single CBM-IAT session on fatigue bias and symptoms was tested among volunteers in an experimental 2 (pre-post) X 2 (vitality vs. fatigue training; N=60) study, and a single-group pre-post vitality-training (N=63) study.

**Findings:** Correlations between SI-IAT and CIS/SVS were found non-significant. The experimental study showed positive CBM effects on fatigue bias ( $p=.058$ ) and self-reported vitality ( $p=.002$ ), but not on self-reported fatigue ( $p=.11$ ). The pre-post study revealed decreased fatigue bias after CBM ( $p<.001$ ), but no changes in self-reported measures.

**Discussion:** These studies tentatively suggest that subjective fatigue is affected by an implicit self-identity fatigue bias, and that such a bias may be corrected with CBM. Further studies should explore validity and reliability of the SI-IAT, as well as sustained CBM effects.

15:15 - 15:30

## Real men don't cry: skill expressing emotions differentially predicts CVD risk in men and women

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<sup>2</sup>The Auckland Regional Pain Service, New Zealand

<sup>3</sup>University of California, Irvine, United States

**Introduction:** Expressing emotions effectively is central to social functioning and linked to health, CVD risk, and mortality. Early work links the ability to smile to lower CVD risk but has ignored the “context” of expressive skill. This report tests whether the ability to express fear, anger, sadness, happiness, and disgust predict equally predicts CVD risk in men and women.

**Methods:** A community sample of 125 men and women (30-75 years) gave blood before completing self-reports of trait emotion, followed by a performance-based test of expressive skill. The accuracy of facial expressions was scored for using FaceReader™ software. Projected CVD risk was calculated using the Framingham algorithm, a New Zealand (NZ) specific algorithm, and the atherosclerosis CVD (ASCVD) algorithm.

**Results:** As expected, skill expressing several emotions predicted projected CVD risk; happiness ability predicted lower risk ( $\beta$ s=-0.38 to -0.41) while greater fear ( $\beta$ s=0.29 to 0.42) and sadness ( $\beta$ s=0.18 to 0.25) skill predicted higher risk. However, sex frequently moderated these links. Specifically, greater happiness skill predicted lower risk in men but not women. Conversely, a greater fear skill predicted higher risk in men while sadness skill predicted lower risk in women but, again, higher risk in men. Exploratory analyses showed that the ability to accurately detect others' emotions periodically moderated some of these links.

**Conclusions:** Greater ability to express emotion has complex links to health outcomes. The ability to flexibly regulate expressions in accordance with gender norms may be one useful way of thinking what constitutes adaptive expressive regulation in physical health.

# Digital interventions for health behavior change

14:00 - 15:30

McMunn

Jane Walsh

14:00 - 14:15

## The impact of digitally-supported personalised goals to reduce sedentary behaviour in a clinically obese population

J. Walsh<sup>1</sup>, J. Groarke<sup>1</sup>, D. Dunne<sup>2</sup>, R. Stapleton<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>Croi, Ireland

**Background:** According to the World Health Organisation (WHO), 39% of the global population are overweight and 13% are obese and the annual cost of identifying and treating obesity-related diseases in Ireland alone is €1.13 billion (WHO, 2015). The aim of this study was to examine the effect of weekly personalised goals and feedback on reductions in sedentary behaviour in clinically obese patients (BMI>30) attending the CLANN lifestyle programme.

**Methods:** A sample of 78 obese men and women participating in the CLANN 10-week lifestyle program were randomised to control or experimental conditions in a 2 (control/experimental) x 2 (baseline/follow-up) design. Clinical (BMI, sedentary behaviour) and psychological variables (anxiety, distress, self-efficacy and social support) were assessed at baseline and again at 10-week follow-up. Participants were fitted with activPAL™ physical activity monitors to monitor sedentary behaviour. The experimental group received weekly personalised sedentary behaviour goals (calculated by subtracting 10% from previous week) and feedback via the activPAL™ data on their progress. The control group received general care for the duration of the programme.

**Findings:** Significant improvements were observed within 10 weeks with reductions in sitting/lying time ( $p<.05$ ), increases in up/down transitions ( $p<.05$ ) and increases in self-efficacy ( $p<.05$ ) in the experimental group compared with controls.

**Discussion:** Personalised goal-setting with frequent feedback and monitoring was effective in reducing sedentary behaviour in a clinically obese population. Settling realistic, attainable goals increased the likelihood of success in achieving targets resulting in increased self-efficacy and yielding significant reductions in sedentary behaviour.



14:15 - 14:30

## MAPS: a highly tailored intervention to support medication-adherence in primary care. A randomized feasibility trial.

K. Kassavou<sup>1</sup>, V. Houghton<sup>1</sup>, S. Edwards<sup>1</sup>, J. Brimicombe<sup>1</sup>, E. Wilson<sup>1</sup>, T. Prevost<sup>2</sup>, S. Griffin<sup>3</sup>, S. Sutton<sup>1</sup>

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<sup>2</sup>Imperial College London, United Kingdom

<sup>3</sup>University of Cambridge, Afghanistan

**Background:** Automated voice and text messaging interventions can significantly increase adherence to patients taking multiple medications. However, no such intervention has been developed and tested in the UK. The aim of this trial is to assess the feasibility, cost, and potential efficacy of MAPS (the Medication Adherence for Patients' Support intervention) to support adherence, as an adjunct to primary care.

**Methods:** Patients with hypertension and/or type 2 diabetes recruited from six GP practices are randomised to intervention or comparator group. Intervention group receives interactive voice and text messages for three months. The intervention messages are highly tailored and include BCTs. The comparator group receives usual care. Intervention feasibility is assessed by recording uptake, retention and follow up rates. Intervention engagement and fidelity is assessed by log files and follow up interviews. Intervention efficacy is assessed by self-reported adherence, practice refill data, electronic monitoring devices (i.e., MEMS) and clinical outcomes (i.e., blood pressure and HbA1c). Intervention cost is assessed by recording the time and resources needed for implementation and the self-reported EQ-5D-5L questionnaire.

**Findings:** 100 patients (n=60 intervention and n=40 comparator) participate in MAPS. Patients from intervention and comparator group complete follow up outcome measurements at the end of the intervention. The intervention increased patients' beliefs about medications, emotional state, and medication adherence self-efficacy.

**Discussion:** MAPS provided rigorous evidence about the feasibility and efficacy of an automated voice and text messaging intervention to support adherence, as an adjunct to primary care.

14:30 - 14:45

## The impact of an mHealth self-management intervention on health outcomes in cancer survivors.

J. Groarke<sup>1</sup>, J. Walsh<sup>1</sup>, J. Richmond<sup>2</sup>, M.G. Kelly<sup>2</sup>, A. Groarke<sup>1</sup>, L. Glynn<sup>1</sup>, J. Mc Sharry<sup>1</sup>

<sup>1</sup>NUI, Galway, Ireland

<sup>2</sup>Letterkenny University Hospital, Ireland

**Background:** The aim of this study is to examine the effect of a personalised mHealth lifestyle self-management intervention to increase physical activity (PA) in cancer survivors with increased health risks related to lifestyle behaviours.

**Methods:** 123 cancer survivors (BMI > 25) were randomly assigned to the control (n=61) or intervention (n=62). Objective measures of health behaviour (i.e., PA and sleep) are collected via Fitbit. Clinical and psychological measures are assessed at baseline and 3 months.

The intervention group attended a 4-hour tailored information session with physiotherapist, dietician, and clinical psychologist designed to support self-management of health behaviour. Participants engaged in personalised goal-setting with self-monitoring and feedback via mobile device for increasing PA.

**Findings:** Baseline data revealed no significant differences between groups. Initial analysis indicated that participants have a positive response to personalised goals and improvements in physical and psychological health at 3-month follow-up.

**Discussion:** A significant proportion of a growing number of cancer survivors are overweight, having implications for long-term health outcomes, including increased risk of subsequent and secondary cancers. There is a need to identify interventions which can improve physical and psychological outcomes that are practical in modern oncology care. Furthermore, m-Health interventions demonstrate potential for positive health-behaviour change, but there is little evidence for the efficacy of mHealth to improve health outcomes in cancer survivors.

14:45 - 15:00

## Social exchange in smartphone-based chat groups: Mechanisms of an mhealth intervention to promote healthy eating

J. Inauen<sup>1,2</sup>, P. Rackow<sup>3</sup>, M. Amrein<sup>2</sup>, U. Scholz<sup>2</sup>

<sup>1</sup>Eawag - Swiss Federal Institute of Aquatic Science & Technology, Switzerland

<sup>2</sup>University of Zurich, Switzerland

<sup>3</sup>University of Aberdeen, United Kingdom

**Background:** Smartphone-based chat groups can successfully promote healthy eating, but it is unknown how. Social exchange might promote healthy eating via enhancing received support or by promoting self-regulation (i.e., action control). In this study, we investigated, which types of social support are exchanged in smartphone-based chat groups. Furthermore, we investigated exchanged social support, and action control as potential mechanisms.

**Methods:** N=203 adults were randomized to the social support or the control condition (information only), and one of two eating goals (eating more fruits and vegetables, or eating fewer unhealthy snacks). Participants completed a 13-day daily diary. During Days 4-10, intervention participants supported each other in smartphone-based chat groups to eat more healthily. Exchanged support was coded from the chat content using the social support behaviour code. Furthermore, eating behaviour, received support and action control were reported in the daily diaries.

**Findings:** The coding of the chat content revealed that attentiveness support (18.7%) and informational support (14.2%) were the most exchanged support types. Interestingly, social support did not directly affect participants' eating behaviour. Action control was the only significant mechanism of the intervention effect. Mediation analyses further indicated that social support affected healthy eating indirectly by enhancing self-regulation.

**Discussion:** Smartphone-based support groups can successfully promote healthy eating through increasing action control. Support exchanged in smartphone-based groups seems to indirectly promote healthy eating via enhancing self-regulation.

15:00 - 15:15

## A smartphone app with personalised text messaging to target alcohol use in an ex-serving population

L. Goodwin<sup>1</sup>, D. Leightley<sup>2</sup>, J.A. Puddephatt<sup>1</sup>, R. Rona<sup>2</sup>, M. Field<sup>1</sup>, T. Mahmoodi<sup>2</sup>, C. Drummond<sup>2</sup>, N. Fear<sup>2</sup>

<sup>1</sup>University of Liverpool, United Kingdom

<sup>2</sup>King's College London, United Kingdom

**Background:** More than half of those who have left UK military service meet the criteria for hazardous alcohol use. Smartphone applications (apps) offer a cost effective approach and may be suitable for this geographically dispersed population. The aim of this feasibility study was to test the usability of a tailored smartphone app in an ex-serving population.

**Methods:** The InDEx (Information about Drinking for Ex-serving personnel) app was informed by the Health Action Process approach, including: i) self-monitoring, ii) goal setting using implementation intentions and iii) personalised text messaging which provided feedback on drinking, self-monitoring and advice on goal setting. Thirty one ex-serving personnel, who met the criteria for hazardous alcohol use, used the app for a 28-day period. Outcome measures included alcohol consumption (in units) and measures of engagement. Median and interquartile range at baseline and follow-up were reported.

**Findings:** Participants initialised the app 15 times, engaging in 29 sessions. The drinks log was the second most visited page (27.5% of views). Participants were engaged for a median of 4 weeks (interquartile range (IQR) 3-4). Descriptive analyses showed a decrease in weekly alcohol consumption, from a median of 22.9 ( IQR 14.3-32.4) to 15.9 (IQR 11.6-26.9) units per week.

**Discussion:** Using a smartphone app with personalised messaging was effective in helping ex-serving personnel to monitor their alcohol use. Whilst self-monitoring is known to be an effective behaviour change technique, this relies on longer term maintenance and the use of personalised text message prompts offers a simple strategy to encourage this.

15:15 - 15:30

## Ethical challenges in international m-health intervention studies.

S. Spahrkäs<sup>1</sup>, A. Looijmans<sup>1</sup>, M. Hagedoorn<sup>1</sup>, R. Sanderman<sup>1,2</sup>

<sup>1</sup>University of Groningen, Netherlands

<sup>2</sup>University of Twente, Netherlands

**Background:** In international trials, for face-to-face interventions mostly clear ethical regulations apply. For the relatively novel m-health interventions however, this seems not to be the case. Which ethical challenges may arise in studying m-health interventions in international trials?

**Methods:** We present our “lessons learned” from the international Untire m-health intervention study, which aims to reduce cancer-related-fatigue (CRF) and improve quality-of-life (QoL) in (former) cancer patients via the use of a smartphone-application, the Untire app. We aim to assess the effectiveness of this app in patients from several countries (Australia, Canada, Germany, Spain, UK, USA, and The Netherlands), to be recruited via social media. We had to explore ethical regulations in each country since no international ethic committee yet exists.

**Findings:** Differences in ethical procedures were encountered. In some countries, ethical procedures were waived since no institutions were involved in recruiting patients. In other countries, it was sufficient to receive approval of the country in which the data are analysed, while others requested a full review from their own ethical institute. Ethic committees also varied in the requested content, statistics, and privacy regulations.

**Discussion:** We experienced that there is no clear consensus in ethical regulations regarding internet-based trials worldwide - it seems a grey zone. Therefore, we will present a systematic overview of all the various ethical procedures of the abovementioned countries. Based on that, we will then present a set of lessons learned, and their implications for our project, which may be of urgent importance for other trials as well.

# e/mHealth for changing health behaviours

15:30 - 17:00

Kathrin Wunsch

15:30 - 17:00

## Tablet use is associated with increased physical activity and decreased loneliness in older adults

T. Pauly<sup>1</sup>, J. Lay<sup>1</sup>, P. Kozik<sup>1</sup>, P. Graf<sup>1</sup>, A. Mahmood<sup>2</sup>, C. Hoppmann<sup>1</sup>

<sup>1</sup>University of British Columbia, Canada

<sup>2</sup>Simon Fraser University, Canada

**Background:** New technology, including tablet computers, may facilitate older adults' everyday activities and contribute to optimal aging. The aim of this study was to examine different types of tablet use (i.e. for exercise purposes, social purposes) and their associations with changes in physical activity, loneliness, and cognitive (executive) functioning.

**Methods:** Eighty-six older, mostly novice tablet users (aged 51-85 years) participated in individualized technology workshops and kept a tablet for personal use over a 6-month period, during which they reported their tablet use biweekly. Physical activity, loneliness, and executive functioning were assessed before and after this 6-month period. Data were analyzed using multiple regression, controlling for baseline levels of the outcome measures, age, gender, ethnicity, education, and relationship status.

**Findings:** Participants who used their tablet more often for exercise purposes reported more pronounced increases in moderate-intensity physical activity and less pronounced decreases in walking time over the 6-month period. Higher frequency of use for exercise purposes was also associated with greater increases in sitting time. Furthermore, higher overall hours of tablet use was positively associated with decreases in loneliness. Neither overall tablet use nor specific function use were associated with changes in executive functioning.

**Discussion:** This study shows that tablet technology may be a useful tool for improving physical activity and social wellbeing in older adults. Findings suggest that new information and communication technology could be an underutilized, high-potential platform to deliver programs that enhance older adults' quality of life.

15:30 - 17:00

## Everyday music listening and its impact on affect regulation and physical activity.

O. Murray<sup>1</sup>, J. Groarke<sup>1</sup>, J. Walsh<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** Advancements in mobile technology have increased individual's opportunities for music listening (ML). The relationship between ML and affect regulation (AR), and ML and physical activity (PA) is well documented. However, laboratory-based experimental work lacks ecological validity. This study will use mobile Experience Sampling Methods (mESM) to examine the effect of ML on AR and PA in naturalistic settings and over time.

**Method:** The mESM application MuPsych will collect real-time data using 156 participants aged 18 and older, observation will run for two weeks. MuPsych will collect momentary assessments of emotional experiences (valence and arousal) during randomly sampled episodes of ML and non-musical episodes in everyday contexts. PA data (daily step count) will be measured by pedometer application Accupedo. The Mental-Health Continuum-SF, Emotion Regulation Questionnaire, Positive and Negative Affect Schedule and Adaptive Functions of Music Listening Scale will be completed by participants at baseline and end-point.

Paired-sample t-tests will determine the efficacy of ML for AR and PA relative to other activities. Hierarchical regression analyses will examine relationships between emotional experiences, level of PA, ML behaviour and well-being.

**Findings:** It is hypothesized that AR and PA will be greater in ML episodes than non-musical. It is expected that PA, adaptive emotional experiences, and greater ML will predict improved well-being. Findings presented in August.

**Discussion:** This study builds upon laboratory research and examines the impact of ML on AR and PA in naturalistic settings. It evaluates ML as a cost-effective mHealth intervention for improving AR and increasing health behaviour (PA).



15:30 - 17:00

## To identify efficacious self-regulation techniques in an e- and mHealth intervention targeting an active lifestyle.

H. Schroé<sup>1</sup>, C. Van der Mispel<sup>1</sup>, I. De Bourdeaudhuij<sup>1</sup>, M. Verloigne<sup>1</sup>, L. Poppe<sup>1</sup>, G. Crombez<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

**Background:** E- and mHealth interventions are promising to change people's behaviour. Until now, many interventions use a range of behaviour change techniques, yet unknown whether these techniques are equally important to obtain behaviour change. It may be that a limited set of these techniques is sufficient. In this study, the aim is to investigate the efficacy of three behaviour change techniques (i.e. action planning, coping planning and self-monitoring) on physical activity, sedentary behaviour and related determinants.

**Methods:** In a 2x2x2 factorial trial, 480 adults from the general population will use the e- and mHealth intervention 'MyPlan 2.0' for five weeks. Participants will be randomly allocated to eight groups. Each group will receive a different version of 'MyPlan 2.0', in which the three behaviour change techniques will be combined in order to achieve self-formulated goals about physical activity or sedentary behaviour. Levels of physical activity, sedentary behaviour and related determinants will be measured via self-report questionnaires. Multilevel analyses will be conducted using SPSS 24.0.

**Expected results:** We hypothesize that 'MyPlan 2.0' based on an optimal mix of self-regulation techniques will show higher efficacy on the outcomes.

**Current stage of work:** MyPlan 2.0 has already been developed, data collection will start in March 2018.

**Discussion:** This study will provide insight into the role of various behaviour change techniques in changing health behaviour and its determinants. Its experimental and longitudinal design, allows an in depth analysis of processes underlying behaviour change, enabling to provide guidance for development of future e- and mHealth interventions.

15:30 - 17:00

## Sex difference in physical activity changes to an e-health behaviour change intervention.

P. Deshpande<sup>1,2</sup>, P. Oh<sup>3</sup>, K. Lavoie<sup>2,4</sup>, G. Szczepanik<sup>1,2</sup>, S. Bacon<sup>5</sup>

<sup>1</sup>Concordia University, Canada

<sup>2</sup>CIUSSS-NIM, Canada

<sup>3</sup>Toronto Rehabilitation Institute, Canada

<sup>4</sup>Université du Québec à Montréal, Canada

<sup>5</sup>Concordia University & CIUSSS-NIM, Canada

**Background:** Poor diet and physical inactivity have negative impacts on health. Epidemiological data suggests that, there are sex differences in the impact of poor health behaviour on chronic disease development. However, there is limited data on sex specific responses to e-health behaviour change interventions.

**Methods:** A total of 45 men and 94 women participated (mean[SD] age=50.6[11.0]) in the online ACCELERATION program, a 12- week structured behaviour change intervention delivered in 4 sites across Canada. The program focused on improving physical activity, diet, smoking and alcohol consumption.

**Result:** Repeated measures mixed model analyses found trends over 12 weeks for sex specific intervention effects on physical activity ( $F=3.25$ ,  $p=.072$  +49min MVPA in women, +11 min in men), sedentary time ( $F= 3.06$ ,  $p=.057$ ; -0.75 hours/week in women, 0.24 hours/week in men), and alcohol consumption ( $F=3.68$ ,  $p=.082$ ; -.28 drinks/week in women, -1.43 drinks/men). There were no sex-differences in fruit and vegetable intake ( $F=0.01$ ,  $p=.903$ ) nor smoking ( $F=0.82$ ,  $p=.377$ ).

**Conclusion:** There were suggestions of sex specific responses to the online ACCELERATION program. Women had better physical activity and sedentary behaviour responses compared to men but lower reductions in alcohol consumption. These provide importance insights into the potential ways in which the online ACCELERATION platform can be tailored in the future.

15:30 - 17:00

## Activity Matters: A Web-based resource to enable people with Multiple Sclerosis to become more active.

B. Casey<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** To describe the development of a web-based resource to enable people with Multiple Sclerosis (pwMS) to become more active, namely, 'Activity Matters'.

**Methods:** Development of 'Activity Matters' was guided by the UK's Medical Research Council (MRC) Complex Interventions framework and a behavioural model entitled the Behaviour Change Wheel (BCW). Seven sources of data were used to inform the process and were mapped on to both the MRC and BCW. Five of these sources were research papers conducted by the authors. These included three systematic reviews and two original research studies. The other data sources were conducted by MS PA research groups from North America and Europe.

**Findings:** The intervention is theoretically based and constructs including, knowledge, memory, attention and decision processes, skills, social influences, environmental context and resources, beliefs about capabilities, beliefs about consequences, goals and emotions were recognised as important. Intervention functions and techniques that will be used on the website include, education, enablement, environmental restructuring, persuasion, incentivisation, action planning, goal-setting, social-support and problem-solving.

**Discussion:** 'Activity Matters' is the first MS PA intervention to use the theoretical approach outlined by the MRC and BCW. The next phase of this work is to test the usability, acceptability and preliminary effectiveness of 'Activity Matters'.

15:30 - 17:00

## A family-based m-health intervention to promote physical activity and healthy eating

K. Wunsch<sup>1</sup>, J. Gnam<sup>1</sup>, B. Renner<sup>2</sup>, A. Woll<sup>1</sup>

<sup>1</sup>Karlsruhe Institute of Technology, Germany

<sup>2</sup>University of Konstanz, Germany

**Background:** Physical activity and healthy nutrition are commonly known as core facets of health. However, recent studies confirm a lack of these aspects in today's society. With most people lacking time for exercise and cooking, m-health applications may be the means of choice to promote healthier lifestyles. The current study aimed to develop a smartphone intervention app based on scientific theoretical background which uses behavior change techniques (BCT's) to promote physical activity and healthy eating behavior in a family setting.

**Methods:** A total of at least 30 families will be randomized into one of two groups: an intervention group, receiving three weeks of the m-health intervention, and a waiting list control group. Participants' daily activity was measured via accelerometry for a duration of one week prior and following the m-health intervention. Moreover, participants completed questionnaires about their daily activity and eating behavior.

**Expected results:** As of the low count of participants, first descriptive analyses point to an increase in moderate to vigorous physical activity following the intervention. However, more participants will be examined to further study this first impression.

**Current Stage of work:** Until now, four families (n = 10) participated in a pilot study on the intervention.

**Discussion:** This study is the first to establish a m-health intervention in a family setting based on assumptions made by self-determination theory using BCT's. Preliminary results point to a substantial improvement of healthy lifestyles in all family members. However, further participants need to be examined in order to attain more convincing results.

15:30 - 17:00

## Examining the association between food outlets and eating behaviour: A Geographic Information System (GIS) study

K. Elliston<sup>1</sup>, S. Ferguson<sup>1</sup>

<sup>1</sup>University of Tasmania, Australia

**Background:** mHealth apps can deliver content to individuals as they go about their daily lives. In addition, researchers are interested in using mHealth apps to predict behaviours before they occur and proactively intervene. Discretionary food intake—“snacking”—has been shown to be influenced by environmental food cues. However, studies that have explored this relationship typically rely on self-reports of environmental cues. Here we explore the feasibility of using geographic information system (GIS) data to predict snacking.

**Method:** 112 individuals recorded their food intake for two weeks using electronic diaries. Participants also answered questions during other, randomly-timed points throughout the day. During both the eating and randomly-timed (non-eating) assessments, participants reported the type and number of nearby food outlets; additionally, participants diaries recorded their GPS location. GPS location was plotted on a GIS map of food outlets, allowing us to calculate the number (and type) of food outlets within a given radius during each assessment.

**Expected results:** Objective and self-report data will be compared to determine the correlation between GPS-derived and self-reported location. Next, both estimates will be used in participant-level logistic regression models to determine whether or not location can discriminate between eating and non-eating instances.

**Current stage of work:** 112 participants worth of data has been collected, with additional data collection and analysis in progress.

**Discussion:** If passively knowing an individual’s location is sufficient to predict eating, then mHealth apps may be able to issue personalised dietary interventions when individuals enter locations where they are at risk of overeating.

# e/mHealth for supporting those with chronic illness

15:30 - 17:00

Cynthia C Forbes

15:30 - 17:00

## Reducing the patient interval for breast cancer: developing a digital intervention using the Person-Based Approach

E. Carr<sup>1</sup>, J. Walsh<sup>1</sup>, A. Groarke<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** This study aims to examine the usability of a digital intervention (DI) designed to decrease the patient interval for breast cancer. The DI was developed using qualitative data from focus groups as well as current research evidence. The objective is to elicit feedback from users of the DI that will then be used to update the design of the DI to improve usability and acceptability. Eliciting end-user feedback during the design phase is central to the Person-Based Approach (PBA) to DI development.

**Methods:** A qualitative design will be used to collect data via think-aloud interviews which will be audio-recorded, transcribed verbatim and thematically analysed. Participants (n=10) will be sampled purposively based on age, sex and occupation.

**Expected results:** Participants' think-aloud interviews will provide data on the usability of the DI. The results of the thematic analysis will be used to refine the design of the DI thereby improving usability and acceptability of the final intervention to reduce the patient interval for breast cancer.

**Current stage of work:** Ethical approval has been granted.

**Discussion:** It is now accepted as good practice to elicit end-user/patient views during the design phase of interventions. It is hoped that incorporating these views into the development of interventions will enhance their acceptability and usability, and therefore, effectiveness. Research contributing to this evidence base is important to the field of health psychology.

15:30 - 17:00

## Designing eHealth interventions for self-management of chronic conditions: Identifying facilitators and barriers from patient perspectives.

P. O'Reilly<sup>1</sup>, B. Slattery<sup>1,2</sup>, B. McGuire<sup>1,2</sup>

<sup>1</sup>NUI Galway, Ireland

<sup>2</sup>Centre for Pain Research, NUI Galway, Ireland

The last twenty years has seen significant advances and increased levels of adoption of eHealth technologies in many areas of healthcare research, e.g. the self-management of chronic pain. Although the efficacy of eHealth interventions has been shown for pain self-management with adolescent and adult populations, there is little evidence overall for the efficacy of eHealth interventions among older adults, a population who often have to live with painful long-term conditions which can lead to increased levels of disability, impaired quality of life and depression, and whose needs it has been suggested are not considered in the design stage of eHealth technology. This study is concerned with identifying the elements of using eHealth technology that older adults with chronic pain find easy and difficult. The aim of the research is to create guidelines for the design and implementation of future eHealth technology for older adults with chronic pain by identifying the main facilitators and barriers to eHealth technology use for this population. Qualitative methods will be utilised to gather data, with focus groups carried out with older adults with chronic pain and pain specialists and the data being analysed using thematic analysis. Our findings will enable the creators of eHealth technology to design more suitable and useable technology for older adults by learning of the facilitators and barriers and creating eHealth technology specifically with those elements in mind, which we hope will change, if not advance, the literature in terms of how digital technology and interventions are designed.



15:30 - 17:00

## The influence of music on affect regulation and post-traumatic growth in a cancer population.

N. Warner<sup>1</sup>, A. Groarke<sup>1</sup>, J. Groarke<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** The influence of affect and coping styles on post-traumatic growth (PTG) is unclear. Music is frequently employed to induce positive and negative affective experiences in the laboratory, and affect regulation (AR) is the most common function of music listening in everyday life. This novel research using Experience Sampling Methods (ESM) will further explore the relationship between positive affect (PA), negative affect (NA) and PTG in cancer survivors, while longitudinally addressing the influence of guided music listening on AR in everyday contexts.

**Methods:** Mobile ESM (i.e., MuPsych smartphone application) will measure positive and negative affect (Positive and Negative Affect Schedule), savouring (Savouring Beliefs Inventory), and PTG (Silver Linings Questionnaire) at baseline and 3 weeks later, as well as momentary assessments of affective experience (Emotion Regulation Questionnaire and Music Use Questionnaire Index of Music Listening) during episodes of music listening and episodes of everyday life for a 3-week period.

**Findings:** Data collection for the second stage of this research is ongoing. It is hypothesised that PA will predict PTG at baseline and follow-up. It is also predicted that relative to other activities, music listening will increase PA and AR, and this increase will be associated with PTG.

**Discussion:** A greater understanding of what predicts PTG would assist those working with cancer patients and may contribute to development of treatment plans to assist positive psychological growth. Should music listening be deemed a viable mode of AR in cancer patients, future interventions should consider incorporating music into cost-effective eHealth interventions.

15:30 - 17:00

## Health information seeking on Internet and chronic back pain: a mixed methods study

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**Background:** Affecting a large number of people worldwide and causing a large socioeconomic burden, chronic back pain is a major public health concern. The importance of patient information in chronic back pain is well-known and has taken a new dimension with the development of Internet. Few studies have investigated patient's use of Internet for chronic back pain information with qualitative or mixed Methods: We aim to study chronic back pain patients' experiences, needs and use of Internet for health information. How health professionals perceive these practices and how Internet affects patient-carer relationship will also be explored.

**Methods:** Mixed methods will be adopted. 30 semi-structured interviews will be conducted with chronic back pain patients. 4 focus-groups will be carried out with 30 health professionals managing chronic pain. Thematic and lexicometric analysis will be achieved on the qualitative data. A questionnaire based on the qualitative findings will be administrated to 1'000 chronic back pain patients. Descriptive statistics and analysis of variance will be performed.

**Expected results:** To obtain a description of Internet use among chronic back pain patients and in-depth information on their experiences and needs regarding online health information. The impact of Internet use on patient-carer relationship will be revealed.

**Current stage of work:** Literature review is completed.

**Discussion:** A better understanding of Internet use among people suffering from chronic back pain could lead to care tailored to their specific needs in the digital era. The results could provide guidelines for the development of websites dedicated to chronic back pain.

15:30 - 17:00

## Web-based video-animated and text-tailored advice for Dutch type 2 diabetes patients for improving treatment adherence

H. de Vries<sup>1</sup>, S. Vluggen<sup>1</sup>, S. N.<sup>1</sup>, C. Hoving<sup>1</sup>

<sup>1</sup>Maastricht University, Netherlands

**Background:** Type 2 diabetes Mellitus (T2DM) is a progressive disorder characterized by hyperglycemia. Despite well-known beneficial treatment effects of adequate glycemic control, patients' adherence to core treatment elements (sufficient physical activity, healthy diets and pharmacotherapy) is suboptimal. This study describes the development and a study protocol for testing the effectiveness of a new eCoach, aiming to improve treatment adherence in T2DM patients. At time of presentation, preliminary results will be presented.

**Methods:** The eCoach provides video-animated and text-tailored advice on core treatment elements and is substantiated by theoretical constructs of the I-Change Model. The eCoach will be tested in a pragmatic clustered randomized trial with a waiting list control group. After baseline completion, participants will be randomly assigned to either the intervention (eCoach) or control group (care as usual). After 6 months both groups fill in a follow-up questionnaire including process evaluation questions. Effect analysis will be conducted through a summation of z-scores, related to the minimum clinically important difference for sub-behaviors.

**Findings:** Data collection will be completed in fall 2018. We expect that intervention participants will improve treatment adherence compared to controls. We expect that this tool can be integrated in routine diabetes management and can be used to support healthcare professionals in motivating and supporting T2DM patients in their self-management.

**Discussion:** EHealth interventions have been shown to be a (cost)-effective way promoting health behaviors. Given the scarce consultation time of T2DM patients, and suboptimal treatment adherence, this eCoach can aid in daily self-managing a chronic condition like T2DM.

15:30 - 17:00

## Developing brief messages to support medication adherence in people with type 2 diabetes.

H. Long<sup>1</sup>, Y.K. Bartlett<sup>1</sup>, A. Farmer<sup>2</sup>, D.P. French<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>University of Oxford, United Kingdom

**Background:** Brief messages delivered via short message services have the potential to support medication adherence. Message content is a key intervention feature for supporting behaviour change, but the basis for specifying such content or identifying underlying mechanisms targeted for behaviour change is often unclear. We aimed to identify theoretical constructs (i.e. the targets that interventions aim to change) and behavioural strategies (i.e. features of intervention content) associated with medication adherence in patients with type 2 diabetes from relevant published systematic reviews and map these onto behaviour change techniques (BCTs).

**Methods:** We systematically searched Medline and PsycINFO from database inception to 10th April 2017 for (1) systematic reviews of predictors of or correlates with medication adherence or interventions that identify effective BCTs for adults with physical health conditions and (2) systematic reviews of qualitative studies of experiences of medication adherence of adults with type 2 diabetes. Theoretical constructs and behavioural strategies associated with improved adherence were extracted and mapped onto the BCTv1 taxonomy.

**Findings:** 1701 articles were identified and 25 systematic reviews were included. 21 theoretical constructs (e.g. self-efficacy) and 18 behavioural strategies (e.g. habit analysis) were identified and mapped to 46 BCTs (e.g. habit formation, prompts/cues, information about health consequences).

**Discussion:** We have used a novel approach to identify BCTs that show promise of improving medication adherence, and which could be tested in future digital-health interventions. By using the approach described, mHealth interventions can ensure that message content, and the rationale for such content, is relevant and clearly described.

15:30 - 17:00

## The ACTiOn randomised-control-trial: An online Acceptance-and-Commitment Therapy intervention for people with chronic pain and multimorbidity.

B. Slattery<sup>1</sup>, L. O'Connor<sup>1</sup>, S. Haugh<sup>1</sup>, K. Barrett<sup>1</sup>, S. O'Higgins<sup>1</sup>, C. Dwyer<sup>1</sup>, B. McGuire<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

Multimorbidity (MM) refers to the coexistence of two or more chronic health conditions, where no one condition is primary. Chronic Pain (CP), pain lasting more than 3 months, is a frequently reported MM condition. CP and MM have debilitating biopsychosocial effects for a person. Psychotherapeutic web-based interventions for chronic health conditions have shown positive results. There is a dearth of research using online psychotherapy in the context of MM. The aim of the current study is to compare the effectiveness of an online Acceptance-and-Commitment Therapy intervention with a wait-list control for people with MM where CP features.

Method: Two arm RCT (treatment and waitlist-control) with three time points (baseline, post-intervention, 3-month follow-up). 128 (64 per group) adult participants with two or more chronic conditions, one of which is to be a chronic pain, will be recruited. Pain interference as measured by the Brief Pain Inventory and HRQoL as measured by the SF-12 will act as primary outcome measures. Secondary measures will include depression, illness perceptions, and global impression of change and acceptance.

Results: Descriptive statistics and regression analyses will be used to explore the effects of the treatment.

Current Stage of work: The trial has been registered (ISRCTN22343024) and a pilot study completed. Recruitment to the trial proper is underway and the study is expected to conclude in August 2018.

This RCT will add to current evidence related to the clinical effectiveness of online ACT interventions, both generally for chronic conditions and specifically for people with multimorbidity.

15:30 - 17:00

## Feasibility of tailored eHealth/mHealth physical activity and sedentary behaviour change advice among breast cancer survivors.

C.C. Forbes<sup>1,2</sup>, M. Keats<sup>1</sup>, T. Younis<sup>2</sup>, C. Vandelanotte<sup>3</sup>, C.E. Short<sup>4</sup>, C. Blanchard<sup>1</sup>

<sup>1</sup>Dalhousie University, Canada

<sup>2</sup>Nova Scotia Health Authority, Canada

<sup>3</sup>Central Queensland University, Australia

<sup>4</sup>University of Adelaide, Australia

**Background:** The main purpose is to determine feasibility and acceptability of a tailored web-based exercise and behavioural support program among women who have been diagnosed with breast cancer.

**Methods:** Thirty breast cancer survivors will be recruited to use a tailored, web-based physical activity education and prescription, and behavioural support program. Participants will use all parts of the website, read the modules (e.g. activity benefits, barriers, habit building, motivation, etc.), use the planning tools, and keep track of their activity using a Fitbit Alta HR. We will test 10 participants at a time and iteratively assess the performance of parts of the site. This will allow us to make changes to parts of the site if evaluated poorly. Participants will complete evaluations at the end of the study period (3 weeks).

**Expected results:** The website will be easy to use, acceptable, and useful for women diagnosed with breast cancer. We believe the site and Fitbit will increase awareness of activity levels and useful behaviour change techniques that impact habit formation.

**Current stage of work:** Currently the tailored content is being evaluated by a panel of experts. The next steps are to begin recruitment of the first 10 participants to start the intervention.

**Discussion:** This study will give us proof-of-concept for a pilot randomized controlled trial. This site aims to provide tailored, evidence based exercise programs and behavioural support that will aid women during and after treatment be more active and potentially improve their quality of life.

# Mental health promotion & occupational health

15:30 - 17:00

Caroline Rawdon

15:30 - 17:00

## Mental Health Promotion for Japanese City Employees

K. Takenaka<sup>1</sup>, K. Miura<sup>2</sup>, T. Tsutsumi<sup>3</sup>

<sup>1</sup>Waseda University, Japan

<sup>2</sup>Faculty of Health and Medical Care, Saitama Medical University, Japan

<sup>3</sup>Faculty of Health Psychology, Osaka University of Human Sciences, Japan

**Background:** Japan is experiencing a high suicide rate, as well as worksite, community, and school absenteeism due to stress. Thus, prevention and promotion certainly play important roles in order to mitigate these hazardous outcomes of stress. The purpose of this study is to develop of and examine the efficacy of our mental health promotion campaign, "ABC Activities for the Mind".

**Methods:** The "ABC Activities" consist of three parts: "Act", such as engaging in mentally, physically, and socially active behaviors; "Belong", such as belonging to formal or informal groups; and "Challenge", such as doing volunteer work, helping others, and taking on small challenges. When these behaviors are incorporated into people's daily lives, they help obstruct negative ruminations that may lead to mental health problems. We distributed the "ABC Activities" leaflets to 1,121 city employees and after 4 weeks, conducted a survey through their Intranet.

**Findings:** 43 % of respondents indicated that they have high or moderate stress in their daily lives. 61% of them didn't proactively engage in any behaviors to promote positive mental health. 35% were able to remember and understand the content of the leaflet and 31% showed intention to adopt the behaviors.

**Discussion:** The campaign is a model that encourages preventive action that can be done in everyday life and allows a person to devote attention to oneself. Intentions to adopt the behaviors will increase if it would become higher probability to read the leaflet. Strategies to let people read the content will be necessary in future.



15:30 - 17:00

## Nursing students lifestyles throughout their university degree course

M. Cruz<sup>1</sup>, M.d.C. Barbieri-Figueiredo<sup>1</sup>, L. Carvalho<sup>1</sup>

<sup>1</sup>Escola Superior de Enfermagem do Porto, Portugal

**Background:** PEER-Peer Education Engagement and Evaluation Research aims at developing benchmarks of best practices in health promotion and peer education involving university students. Focusing on the health and training of future nurses, we seek to promote the learning of practices related to health promotion, to assess lifestyles upon entry to and exit from the university degree course and to develop peer education interventions.

**Methods:** Taking into account the steps of the implementation process of the PEER model we proceeded, first of all, with a Social Diagnosis and an Epidemiological Diagnosis. In the former, we took into account a documentary analysis and evaluations carried out within the scope of other institutional studies. For the Epidemiological Diagnosis we used the FANTASTIC lifestyle questionnaire, which was answered online by 1st-year (112) and 4th-year (185) students. We proceeded with a descriptive analysis of the results.

**Expected results:** Preliminary results indicate a change in lifestyles throughout the university degree course. Tobacco consumption and stress are some of the lifestyles that deteriorate throughout higher education courses.

**Current stage of work:** We are now at the behavioural and environmental diagnosis stage. Together with students from the community, and using a Focus Group and a documentary analysis, we will make proposals for peer education interventions.

**Discussion:** The importance of behaviours and lifestyles for physical and mental health is indisputable, so providing an individual and collective reflection on students in the process of learning their profession is a means of promoting their health and that of their future customers.

15:30 - 17:00

## Embedding practitioner experience in health psychology student training: Development of a student-delivered health coaching service

J. Allan<sup>1</sup>, C. Cooper<sup>1</sup>, J. Dunsmore<sup>1</sup>, L. Leighton-Beck<sup>2</sup>, D. Ross-Archer<sup>2</sup>, N. Qamar<sup>1</sup>, M. de Bruin<sup>1</sup>, M. Johnston<sup>1</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

<sup>2</sup>NHS Grampian, United Kingdom

**Background:** Students early in their health psychology training often struggle to acquire public health practitioner experience. Meanwhile, there is a shortage of staff to deliver behaviour-change interventions. The present work aimed to develop a student-delivered health coaching service to support health behaviour change in employees from a large University.

**Methods:** Evidence-based health coaching methods based on manuals developed and used by NHS Grampian Public Health services were used as the basis for training and delivery. Development work included a review of literature on workplace health interventions, focus groups with staff, a survey of managers about employee participation, negotiations with University management, training of a staff member to oversee operation of the service and training and competency assessment of student coaches.

**Findings:** The literature review demonstrated that health coaching can produce beneficial effects on employee health and wellbeing provided participation is easy, convenient, well timed and supported by management. Staff in focus groups (n=7) were interested in receiving health coaching and echoed review findings on participation. Management were supportive of the service but wanted assurances that participation would not interrupt core work duties. A programme that took these findings into account was developed and the first cohort of students (n=14) completed their training in Feb 2018. So far, 11/14 have achieved the level of competency required to work in the service.

**Discussion:** Student-delivered health behaviour change interventions are a feasible way to embed relevant practitioner training into health psychology teaching. Further, students can increase capacity for intervention delivery in public health.

15:30 - 17:00

## Seasonal flu vaccination: what (de)motivates health employees?

N. Dernovšček Hafner<sup>1</sup>, T. Urdih Lazar<sup>1</sup>

<sup>1</sup>University Medical Centre Ljubljana, Slovenia

**Background:** The flu vaccination rate among the Slovenian population, health workers, and Ljubljana University Medical Centre staff (3.2%, 9.1%, and 10.4% in 2015/2016, respectively) is very low, hindering effective protection against the spread of this infectious disease.

**Methods:** In 2017 a survey was conducted at the Ljubljana University Medical Center regarding flu vaccination among its employees, the factors that (de)motivate them to be vaccinated, and their attitudes toward vaccination and its effectiveness. The questionnaire (in paper and electronic forms) was completed by 1,320 employees.

**Findings:** The share of respondents that are vaccinated regularly (every year) is 26.2%, consisting primarily of the most informed and educated employees. Physicians predominate among those regularly vaccinated (57.8%). Those that have never been vaccinated include 41.3% of nurses and midwives, and 44% of other health workers. The three main reasons reported for being vaccinated in the 2016/2017 season are to protect oneself against flu, to protect one's family against flu, and to protect patients. The predominating motives for not being vaccinated can be divided into two categories: mistrust of vaccination and the vaccine, and overconfidence in one's own health and immunity. Among the measures to increase the vaccination rate at this institution, the highest share of respondents (over 60%) agreed with the following: vaccination during working hours, free vaccination for employees, more vaccination stations, and greater flexibility in terms of time.

**Discussion:** The findings will be taken into account in organizing vaccination activities during the next flu season.

15:30 - 17:00

## Work and health needs in the aging population: an analysis on Italian employees.

F. Previtali<sup>1</sup>, A. Gragnano<sup>2</sup>, M. Miglioretti<sup>1</sup>

<sup>1</sup>University of Milano-Bicocca, Italy

<sup>2</sup>Université du Québec à Montréal (UQAM), Canada

**Background:** Work-health balance (WHB) is a state in which workers are able to effectively balance personal health needs and work demands. The management of health is a crucial domain for aging employees and a good WHB may enhance their well-being in organizations. In the frame of Job Demands/Resources model, we examined whether WHB sequentially mediates with emotional exhaustion the relationship between job demands and job satisfaction/presenteeism; with work engagement the relationship between control and job satisfaction.

**Methods:** 323 Italian workers aged over 50 years filled out a self-reported questionnaire. Workload (job demands), control (job resources), WHB, emotional exhaustion, work-engagement, presenteeism, job satisfaction and demographics were assessed. Double mediation analyses were performed with PROCESS macro for SPSS (model 6).

**Findings:** Gender had a significance influence on emotional exhaustion ( $b=-.206$ ;  $p=.033$ ); job type on WHB ( $b=-.096$ ;  $p=.001$ ) and satisfaction ( $b=.061$ ;  $p=.014$ ). WHB and emotional exhaustion sequentially mediate: the relationship between workload and satisfaction (total estimate effect:  $-.220$ ; 95% CI:  $-.343$ ;  $-.097$ ); the relationship between workload and presenteeism (total estimate effect:  $.267$ ; 95% CI:  $.157$ ;  $.377$ ). In the resources direction too, the double mediation of WHB and work-engagement between control and job satisfaction is significant (total estimate effect:  $.377$ ; 95% CI:  $.261$ ;  $.489$ ).

**Discussion:** WHB mediates the effect of workload and control on job satisfaction and presenteeism, partially influencing the effect of emotion exhaustion and work engagement on the outcomes. Assessing a good balance between work and health needs in organizations may help aging workers in increasing job satisfaction and lowering presenteeism.

# Family & Health

15:30 - 17:00

Tony Cassidy

15:30 - 17:00

## Family Health Culture, Health Locus of Control and Health Behaviours in older children

T. Cassidy<sup>1</sup>, S. Hilton<sup>1</sup>

<sup>1</sup>Ulster University, United Kingdom

**Background:** Many factors impact on the health of adolescents and in a climate of high levels of obesity, and poor health behaviours it is important to understand these in order to target interventions. The aim of this study was to explore the relationship between family health culture, health locus of control and adolescent health behaviours.

**Method:** This cross-sectional survey assessed 1462 participants aged from 16 to 18 years of age, with 568 males and 894 females. Participants completed new measures of family health culture as well as standard measures of health locus of control, family environment, and health behaviours.

**Results:** The results show that regular breakfast consumption, family health culture, family encouragement for personal growth, and internal health locus of control are all significant predictors of adolescent health behaviours.

**Discussion:** The implications of this study point to the family as a rich source for intervention. Whole family interventions tend not to be common in health promotion but could be part of an ecological model to consider children's eating habits and food choices. The ecological model considers how the immediate and wider environment affect behaviour over time. This may be an important perspective from which to consider adolescent health behaviours, especially as their social groups and relative influences change over time. Families are an important part of the social ecology and may provide the starting point for a more ecologically valid approach to health promotion.

15:30 - 17:00

## Family Assets and Their Associations with Positive Youth Development in Early Adolescence

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<sup>1</sup>Department of Health Psychology, Medical Faculty, PJ Safarik University, Kosice, Slovakia

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<sup>3</sup>Department of Community & Occupational Medicine, University Medical Center Groningen, University of Groningen, Netherlands

<sup>4</sup>Graduate School Kosice Institute for Society and Health, Medical Faculty, PJ Safarik University, Kosice, Slovakia

**Background:** The theory of positive youth development (PYD) approaches adolescents as having potentials that might not be developed fully, whereas previous theories mostly consider them to be problematic. At the same time, family seems to be one of the sources that have a crucial role in the healthy development of adolescents. Therefore, we aimed to investigate the associations between socioeconomic status (SES) of the family, crisis in the family, various family assets and PYD in adolescence with family assets.

**Methods:** Adolescents in our sample (N=341, 43.8% boys, mean age=13.16) completed questions on SES and experienced crises in the family, the Alabama Parenting Questionnaire measuring parenting styles, questions on family activities and Very Short Version of PYD as a part of the baseline wave of a Care4Youth cohort study. We assessed associations using linear regressions.

**Findings:** Crisis in the family ( $p<0.01$ ) and poor supervision ( $p<0.05$ ) were found to be significantly associated with lower PYD, whereas higher SES, ( $p<0.01$ ), positive parenting ( $p<0.001$ ) and more frequent family activities ( $p<0.001$ ) were found to be significantly associated with higher PYD.

**Discussion:** The presence of crisis in the family and poor supervision might negatively while positive parenting, family activities and SES might positively influence the healthy development of adolescents.

15:30 - 17:00

## Well-being orientations within the family: hypotheses of intergenerational transmission.

M. Nicolotti<sup>1</sup>, E. Marini<sup>1</sup>, M.E. Magrin<sup>1</sup>

<sup>1</sup>University of Milano-Bicocca, Italy

The present study aims at exploring hedonic and eudaimonic orientations to well-being, in terms of time perspective and life aspirations, and possible patterns of transmission within the family. The main question regards whether parental influences might contribute in explaining their kids' orientation.

Two studies were conducted, the first taking into account 144 mother-child dyads and the second taking into account 87 father-child dyads. In both cases children were pre-adolescents and both members of the dyad completed a questionnaire. This included an adaptation of both the Time Perspective Inventory and the Aspiration Index and the Satisfaction with Life Scale.

Data was analyzed through correlations, regressions and moderation analysis to account for the role of gender and age.

Results from the first study show a significant relation between eudaimonic orientations of mother and child, which becomes stronger for older daughters, while becoming weaker for older sons. A significant relationship emerged also between hedonic orientations of mothers and daughters.

Results from the second study show a significant relationship between both hedonic and eudaimonic orientations of father and child, with different directions of the relationship according to child's age. For younger children, especially sons, orientations are inversely related, while they are positively related for older kids, especially daughters.

Findings show potential patterns of transmission of well-being orientations within the family, suggesting different roles for orientations held by mothers and fathers. Child's gender and age play a moderating role in these patterns, suggesting older daughters' well-being orientation becomes more similar to that of their parents.



15:30 - 17:00

## “It’s not fair!” Parental perceptions of injustice in the interpersonal context of pediatric pain.

F. Baert<sup>1</sup>, Z. Trost<sup>2</sup>, J. McParland<sup>3</sup>, D. Van Ryckeghem<sup>4</sup>, L. Goossens<sup>1</sup>, T. Vervoort<sup>1</sup>

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<sup>3</sup>Glasgow Caledonian University, United Kingdom

<sup>4</sup>University of Luxembourg, Luxembourg

**Background:** Research has increasingly highlighted (negative) pain-related appraisals as having a crucial impact on the pediatric pain experience. Pain-related injustice appraisals (PIA) are found to be a key factor in this regard, impacting upon child pain intensity, disability and emotional distress. However, injustice research is in its infancy. For instance, pain occurs in an interpersonal context and studies have demonstrated that an observer or caregiver’s appraisals can significantly impact upon a sufferer’s pain experience. This dynamic might be particularly prominent in the parent-child relationship, in which parents may experience a child-oriented as well as a self-oriented sense of injustice. Both appraisals may constitute differential motivational substrates for parental caregiving behavior, which can differentially impact upon the child’s pain experience. This project aims to examine (1) the phenomenology of PIA in response to child pain, (2) the impact of PIA upon child pain-related outcomes and (3) the explanatory role of parental anger in this relationship.

**Studies:** An overview of studies included in this research project will be presented. To date, a questionnaire study (N=726) and focus group study (N=21) among mothers of children with chronic pain.

**Results:** In the questionnaire study, parental self-oriented injustice contributed significantly to child functioning in a clinical and a school sample. Interpretative Phenomenological Analysis of focus group data revealed preliminary themes such as a lack of validation, attempts to put things into perspective and a fight for a normal life. These are themes that do not seem to be captured in available injustice assessment measures.

15:30 - 17:00

## Infertility practitioners experience of the psychological sequelae of unmet parental goals: A Delphi Consensus Study

S. Moore<sup>1,2</sup>, J. Moses<sup>3</sup>

<sup>1</sup>NHS Wales, United Kingdom

<sup>2</sup>Cardiff University, United Kingdom

<sup>3</sup>Cardiff & Vale University Health Board, United Kingdom

**Objective:** To evaluate the clinical applicability of the Three Task Model of Adjustment to Unmet Parenthood Goals (Gameiro & Finnigan, 2017). Fertility practitioners' reports of their therapeutic practice was captured when they worked with individuals who had stopped unsuccessful fertility treatment(s), but who remain distressed due to unfulfilled parental goals.

**Method:** An online, modified Delphi methodology was used to seek the views and derive consensus from an international, expert panel of 25 infertility practitioners (female n=24, Male =1). All practitioners worked with post treatment distress in fertility clinics and privately. Qualitative and quantitative methodology was used. Thematic analysis generated 26 themes relating to unfulfilled parental goals and associated distress. Themes were operationalized into statements and in round two the expert panel provided ratings which allowed calculation of consensus levels. Themes that had yet to reach consensus were feedback to the expert panel for process of iteration in round three.

**Conclusions:** Emergent conclusions support a need for psychosocial support following failed infertility treatment to facilitate grief for lost parental goals. Practitioners highlighted the therapeutic relationship in moderating distress and facilitating acceptance and psychological adjustment. Furthermore, results from the Delphi also supported the clinical utility of the Three Tasks Model of Adjustment to Unmet Parenthood Goals as evidenced by consensus on the three psychological tasks of acceptance, meaning-making and pursuit of new life-goals for the promotion of reducing distress and helping individuals to move forward.

15:30 - 17:00

## How do people experience a family member's highly lethal self-harm? A qualitative study

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<sup>2</sup>National Suicide Research Foundation, Cork, Ireland

<sup>3</sup>Department of Emergency Medicine, University of Massachusetts Medical School, Worcester, United States

**Background:** The use of highly lethal methods of self-harm is increasing, yet its physical and psychological impact on family members has been largely neglected in the literature. This study sought to explore the experiences of individuals whose family members presented to hospital with highly lethal self-harm, in relation to their psychological and physical health and health behaviours.

**Methods:** Qualitative interviews were conducted with participants (six females, three males) whose family member presented to a large tertiary hospital emergency department with highly lethal self-harm. Participants were drawn from the Suicide Support and Information System Case-Control Study (SSIS-ACE) that was conducted in Cork, Ireland between 2014 and 2017. Interpretative phenomenological analysis was used to analyse the data.

**Findings:** Four superordinate themes were identified: (1) quest for meaning; participants engaged in a meaning-making process, where they attempted to identify triggers for the self-harm; (2) feelings of responsibility; participants felt personally responsible for the self-harm, which emphasised the importance of self-care; (3) challenges with health services; lack of aftercare for participants and their family member's negatively impacted participants' ability to move forward following the self-harm; (4) implications for health and well-being; participants experienced a range of reactions including anxiety, nausea and vomiting that often extended to longer-term impacts.

**Discussion:** Participants experienced depression, anxiety, loss of self-esteem, nausea, vomiting, hypertension and a worsening of general health following the self-harm. Health behaviours were particularly impacted in the weeks and months after the self-harm. The lack of formal and informal supports further compounds and worsens experiences.

15:30 - 17:00

## Medicine use in early childhood: Which vaccines, branded or generic medicines do parents choose?

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<sup>1</sup>University of Otago, New Zealand

**Background:** Despite generic medicines being bioequivalent and cheaper, many people prefer branded medicines to generic medicines. We aim to explore parents' use of branded/generic medicines for their children, and whether this is linked to their vaccination behaviour.

**Methods:** 196 parents of children five and under were recruited through an online panel to match the New Zealand demographic profile for parents (by age, gender, ethnicity and region). They completed an online survey about the medicines they use for themselves and their children, their ability to identify branded medicines, the vaccines they and their children have received, and a variety of questions about their perceptions of vaccines, and branded and generic medicines.

**Findings:** Parents preferred branded medicines for their children, and to a slightly lesser extent for themselves. Parents' ability to identify branded from generic medicines was associated with preference for branded medicines for both children,  $r = .24$  [95% CI: .10, .36], and themselves,  $r = .30$  [.17, .43]. Parents with more positive attitudes towards vaccines were more likely to prefer generic medicines for themselves,  $r = .28$  [.15, .41], but not for their children,  $r = .06$  [-.08, .20]. Self-reported vaccination behaviour was not strongly linked to generic or branded medicine choices,  $r_s < .15$ .

**Discussion:** Parents' vaccine choices for their young children were not linked to their preferences for branded/generic medicines for their children. Linking demographic variables to vaccine and medicine choices may help determine strategies that can be used to improve child health.

# Stress, coping, & wellbeing during childhood & adolescence

15:30 - 17:00

Daniela Ghio

15:30 - 17:00

## The role of individualism and collectivism in flexible coping with stress of Polish adolescents

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**Background:** Coping flexibility describes individuals' ability to effectively modify their coping strategies according to the demands of different stressful situations. The choice of coping strategies in the youth depends on social factors as well as their individual properties, such as the system of individualistic – collectivistic values.

Individualism is the tendency to prioritize individuals' interests and goals over groups' goals and interests. Whereas, collectivism refers to the network of interpersonal sharing, cooperation and obligations. The purposes of the study was to assess the dominant values system of Polish youth and the nature of the relationship between the youth values system and flexible coping with stress.

**Methods:** 80 respondents (44 girls and 36 boys) aged 14-20 participated in the studies (M=16.44; SD=2.07). Average age of girls was M=16.66 (SD=2.08) and average age of boys was M=16.23 (SD=2.09) ( $t=0.90$ ;  $df=74$ ;  $p=0.977$ ). Following methods were applied: Individualism-Collectivism Questionnaire by Triandis & Gelfand (1998); Flexibility Coping Questionnaire – 14 by Basińska & colleagues and personal survey.

**Findings:** Polish adolescents presented the vertical collectivism the most (M=27.93; SD=6.62) and the vertical individualism the least (M=20.74; SD=6.36). Individualistic horizontal orientation of adolescents was positively correlated with flexible coping with stress ( $r=0.33$ ;  $p=0.003$ ) and their subscales: Repertoire ( $r=0.30$ ;  $p=0.003$ ) and Reflexivity ( $r=0.32$ ;  $p=0.004$ ).

**Discussion:** Polish youth was collectivistic (vertical) oriented, which means that they focus on the internal cohesion of the social group, they belongs. The more adolescents relied on themselves, their own skills, the more they dealt with stress in a more flexible way.

15:30 - 17:00

## Do more adverse childhood experiences also mean more emotional and behavioural problems?

M. Lackova Rebicova<sup>1</sup>, Z. Dankulincova Veselska<sup>1</sup>, D. Husarova<sup>1</sup>, A. Madarasova Geckova<sup>1</sup>, J. van Dijk<sup>2</sup>, S. Reijneveld<sup>2</sup>

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<sup>2</sup>Department of Community & Occupational Medicine, University Medical Center Groningen, University of Groningen, Netherlands

**Background:** Adverse experiences in childhood have a significant impact on mental health in adulthood. Those who have experienced more adverse childhood experiences (ACEs) are at an increased likelihood of emotional and behavioural problems (EBP), however, evidence on the cumulative influence of ACEs during adolescence is scarce. Therefore, the aim was to examine the association of ACEs with EBP among adolescents, and the degree to which this association becomes stronger for increasing numbers of ACEs.

**Methods:** We used the baseline wave of a cohort study on adolescents and their families, comprising 340 respondents aged from 10 to 16 (mean age=13.1 years; 44.2% boys). We measured EBP by the Strengths and Difficulties Questionnaire (total difficulties score and score for internalizing and externalizing problems subscales). We used generalized linear models adjusted for age, gender and socioeconomic status to examine the associations between the number of ACEs (0 vs 1-2 vs 3 and more) and EBP. Presented are B's and 95% confidence intervals (CI).

**Findings:** We found that 1-2 ACEs and 3 and more ACEs were significantly associated with a higher score in total difficulties (1.87, 95%Confidence Interval (CI) 0.50-3.23, 3.55 95%CI 1.56-5.53), internalizing problems (1.39 95%CI 0.44-2.34, 2.31 95%CI 0.89-3.73) and externalizing problems (0.84 95%CI 0.01-1.67, 1.34 95%CI 0.14-2.54) adjusted for age and gender. Associations remained significant after socioeconomic status was added to the model.

**Discussion:** Our results suggest that ACEs has a dose-response effect on EBP in adolescents and that therefore early recognition might help to identify those in need of support.

15:30 - 17:00

## Factors associated with mental health and quality of life of young carers: a study protocol.

E. Jarrige<sup>1</sup>, G. Dorard<sup>1</sup>, A. Untas<sup>1</sup>

<sup>1</sup>Paris Descartes University, France

**Background:** Young carers are children and teenagers providing significant help on a regular basis to a relative suffering from a physical or mental disease. Many studies have shown that young carers encounter more academic, social, physical and psychological difficulties than children who are not confronted to illness in their family. The present study is the first to highlight the specificities of young carers by comparing them to children facing the illness of a relative but without providing care, and to children who are not confronted to illness in their family.

**Methods:** This study will include 6000 French high school students. They will complete anonymous self-administered electronic questionnaires during school time. Surveys will evaluate their lifestyle, sociodemographic characteristics, quality of life, hobbies, mental health, knowledge and experience with diseases, caregiving activities, family functioning, empathy and coping strategies. Data will be processed using multivariate and cluster analyses.

**Expected results:** Significant differences are expected between the three groups. Results should reveal the most significant psychosocial factors associated to young carers' mental health and quality of life.

**Current stage of work:** Approval of the institutional review board was obtained. Surveys have been pre-tested and collaboration with high schools is in progress in order to begin inclusion.

**Discussion:** Results from this study will enable a better understanding of the effect of being a young carer in comparison with facing a relative's illness without providing care. Moreover, they will favor the development of new ways to help young carers through academic and psychological difficulties.



15:30 - 17:00

## How the use of Instagram impacts on adolescents' well-being: An Italian study

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<sup>1</sup>University of Padova, Italy

**Background:** Adolescents' well-being is strongly related to the interpersonal feedback they receive, and today this mainly occurs through online social networks. The main purpose of this study was to explore the influence of the use of Instagram on adolescents' constructions of self and on their interpersonal experience.

**Methods:** Forty Italian adolescents (23 girls) aged between 11 and 16 years were interviewed and completed repertory grids in order to explore the participants' use of Instagram and their construction of themselves, some elements linked to Instagram, and other people. Different 2x2-mixed model ANOVA tests were used to evaluate the differences between scores in the grids.

**Findings:** The results showed that adolescents' self-construction and distance from others were mostly influenced by receiving, or not receiving, positive feedback, rather than by using Instagram itself. Specifically, there was an increase in self-esteem and social desirability after having received a "like". On the contrary, there was a decrease in the same indices, after not having received positive feedbacks. Furthermore, the results showed an increase in the social isolation when adolescents evaluated themselves on Instagram, especially after receiving no likes.

**Discussion:** This study adds to the existing literature by revealing the enormous importance given to the positive feedbacks represented by followers and posts. These findings are useful in understanding the role of social approval in determining adolescents' well-being and can lead future studies and intervention policies in teenagers' social networking practices.

15:30 - 17:00

## Exploring sex differences in expressive writing intervention

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<sup>3</sup>University Federico II, Italy

Research suggests that women may benefit more from emotional processing therapy than men. The present study examines sex differences in parents participating in an expressive writing intervention.

The study is of a mixed-method explorative nature. Participants were 13 mothers and 10 fathers of children in the off-therapy phase of acute lymphoblastic leukaemia. Treatment outcome was assessed using the Profile of Mood States (POMS) administered at baseline, post-intervention, and follow-up. The Linguistic Inquiry and Word Count (LIWC) was used to categorise emotional and cognitive words emerging during the writing sessions. These words were examined as potential predictors of treatment outcomes.

The main effect for sex was significant ( $F(2, 20)=7.766$ ;  $p<.05$ ;  $PE2=.2703$ ), indicating that mothers generally reported higher levels of negativity in their mood profiles than men, both prior to and following the intervention. The main effect of time was not significant, but the effect size was quite large ( $PE2=.17$ ). Similarly, although the interaction effect was non-significant, indicating that mothers did not benefit significantly more from writing therapy than fathers, the effect size was in the moderate range ( $PE2=.11$ ). Emotional or cognitive words emerging during therapy did not significantly predict treatment outcome in either sex.

Though the results of the current study are not significant and are not to be considered reliable due to lack of statistical power, they do suggest that this intervention may be beneficial, particularly to women. Future treatment studies should include sex as a potential moderator.

15:30 - 17:00

## Electronic media and young children's health: are there more risks behind the screens?

R. Jusiene<sup>1</sup>, I. Laurinaityte<sup>1</sup>, R. Praninskiene<sup>1</sup>, L. Rakickiene<sup>1</sup>, V. Urbonas<sup>1</sup>

<sup>1</sup>Vilnius University, Lithuania

**Background:** Use of electronic media is tremendously increasing in everyday life and age of starting use it is decreasing. Thus there is need to research effects of overall screen time and related risks on young children's mental and physical health. The screen time and its associations with toddlers' and pre-schoolers' health are in scope of this recent population-based study.

**Methods:** Participants are 1014 families with children aged one-and-half year to five-year-old (mean age 42.5 months, 51 per cent male). We collected the parental reported demographic data, information about overall health of child, use of electronic media, parenting behaviour, child's everyday routines, etc. Parents also answered the Child Behaviour Checklist (CBCL/1½-5).

**Findings:** Screen time in early childhood, especially during weekends, is far beyond health recommendations, e.g. half of toddlers were using screens more than 1 hour per day, and nearly half of pre-schoolers - more than 2 hours per day. Longer screen time was related to higher scores of child's emotional and behavioural problems, gastrointestinal symptoms, more frequent sickness (with infectious and cold diseases, but not chronic illnesses), shorter sleep duration and more sleep problems. There were another important circumstances related to both longer screen time and to adverse health, e.g. eating junk foods, keeping IT devices in bedrooms, parental emotional problems, failure to keep on screen-regulating rules, and using media to "entertain" the fussy child.

**Discussion:** Health providers should pay considerable attention to young children's screen behaviour, as it could (dis)cover more serious risks for child's health and development.

15:30 - 17:00

## Image and Emotions; Body Dissatisfaction in Puberty and Adolescence

I. Muscolino<sup>1</sup>, S. Dockray<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

**Background:** Body dissatisfaction is the result of a discrepancy between the individuals' perception of their own body and their ideal one, and is a risk factor for depression, low self-esteem and eating pathologies. Poorly developed emotion regulation have been also associated with higher levels of depression, anxiety, and with behavioural problems. Body dissatisfaction and emotion regulation may be correlated with the psychobiological changes of puberty, as puberty has direct and indirect effects on self-perceptions, and so is likely to influence body dissatisfaction. The aim of this study is to describe the main and interactive effects of emotion regulation, puberty and social context, on body dissatisfaction in adolescence.

**Methods:** The study has a cross-sequential design, with 90 adolescent participants (11-13 years; 45 Male) and measures collected at 3 time-points, over 2 years. Pubertal timing and tempo are calculated using self-reported physical development, as well as biological indicators. Psychometric measures include body uneasiness, emotion regulation and self-perceived competencies. Interviews of the adolescent-parent dyad are used to describe social context. Body dissatisfaction is examined as an outcome of the interaction of the biological, psychological and social context, using mixed methods approaches, including structural equation modelling.

**Expected Results:** Pubertal timing and tempo are expected to contribute to greater body dissatisfaction, and these effects are expected to be mediated by emotion regulation capabilities, social and self-perceived competencies.

**Current stage of work:** In progress.

**Discussion:** Direct effects of hormones on perceptions of the self are under-examined, especially in relation to body dissatisfaction during adolescence.

15:30 - 17:00

## Violence exposure and risk behaviours in South African adolescents: the moderating role of emotion dysregulation

X. Sui<sup>1</sup>, L. Kessels<sup>1</sup>, K. Massar<sup>1</sup>, P. Reddy<sup>2</sup>, R. Ruiter<sup>1</sup>, K. Sanders-Phillips<sup>3</sup>

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<sup>2</sup>Human Sciences Research Council, South Africa

<sup>3</sup>Howard University, United States

**Background:** Violence is a public health concern and can foster risk behaviours in adolescents. To enhance the understanding of the mechanism linking violence and risk behaviours in South African adolescents, we examined the associations between violence exposure across different contexts (home-, school-, community-, political (Apartheid) victimisation) and a composite measure of risk behaviours (smoking, substance use, risky sexual behaviour). The moderating role of emotion dysregulation (inability to regulate sadness and anger) was investigated.

**Methods:** A multi-ethnic (black, white, mixed race, and people of Indian/Asian descent) group of adolescents (N = 925; M age = 16 years, SD = 1.54) completed a survey. Data were analysed separately for boys and girls using hierarchical multiple regression and simple slope analyses.

**Findings:** Boys were more likely to engage in risk behaviours than girls,  $t(844) = 5.25, p < .001$ . Direct community victimisation was a predictor for risk behaviours in boys,  $B = .22, p < .001$ , whereas indirect school victimisation was a predictor for risk behaviour in girls,  $B = .19, p < .01$ . Girls reported more emotion dysregulation than boys,  $t(748) = -2.95, p < .01$ . Only for girls, emotion dysregulation moderated the associations of indirect home victimisation,  $B = .16, p < .01$ , and direct community victimisation,  $B = .15, p < .05$ , with risk behaviours.

**Discussion:** The results indicate the importance to incorporate health education in school-based programmes to build emotion regulation skills, particularly for girls, to promote resilience to the effects of violence on risk behaviours.

# Behaviour change principles & practices

15:30 - 17:00

Gerjo Kok

15:30 - 17:00

## Moderating effect of anticipated regret in intention-behaviour relationship in the case of daily water intake

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<sup>3</sup>University of Leeds, United Kingdom

This longitudinal research analyzed the additional role of anticipated affect in the intention-behaviour relationship. Particularly, we tested if Theory of Planned Behaviour (Ajzen, 1991) constructs could explain intentions and future behaviour with respect to drink at least 2 liters of water a day in young people, considering the impact of anticipated regret plus past behaviour. A total of 272 fully completed the both questionnaire (mean age = 20.41; SD = 1.54; F = 177; M = 95). Regression on intentions showed that significant predictors of intentions to drink at least two liters of water a day were PBC ( $\beta = .32$ ) and anticipated regret ( $\beta = .28$ ), followed by affective attitude ( $\beta = .20$ ) and past behaviour ( $\beta = .17$ ). Moreover, the strongest significant predictors of future behaviour were higher PBC ( $\beta = .32$ ), intention ( $\beta = .31$ ) and past behaviour ( $\beta = .31$ ), followed by interaction term between intention followed by intention ( $\beta = .16$ ). Total explained variances were 37% in intention and 46.1% in behaviour. Our hypotheses was confirmed, particularly, those who strongly perceived anticipated regret about not drinking a regular amount of water tended more to translate their behavioural intention in actual behaviour after 1 month. Starting from the present findings, future research could verify if a manipulation of anticipated regret could be an efficient strategy to increase water intake in young.

15:30 - 17:00

## Feasibility randomized trial of risk communication interventions for promoting cancer genetic risk assessment

A. Kinney<sup>1</sup>, R. Howell<sup>1</sup>, B. Vicuna<sup>1</sup>, R. Ruckman<sup>1</sup>, S. Walters<sup>2</sup>

<sup>1</sup>University of New Mexico, United States

<sup>2</sup>University of North Texas Health Science Center, United States

**Background:** Cancer Genetic Risk Assessment (CGRA) is a precision medicine strategy that facilitates informed decision-making for effective health management among women at increased risk for inherited breast and ovarian cancer. However, less than one third of high-risk women have accessed CGRA. In preparation for a large, definitive trial (n = 927), we conducted a pilot randomized controlled trial to assess preliminary efficacy and test the hypothesis that a personalized risk communication and navigation (TCN) intervention will have greater effects in promoting CGRA over usual care (UC) and mailed generic/targeted print (TP).

**Methods:** Thirty-four high-risk women were recruited through a statewide cancer registry and randomized to UC, TP, or TCN. The TCN intervention was guided by evidence-based behavior change strategies, the Extended Parallel Process Model, and the Health Action Process Approach to bridge the intention-behavior gap. Telephone surveys elicited perceptions about CGRA and the intervention.

**Results:** Women in the TP (M=4.10, SD=0.15) and TCN arms (M=4.38, SD=0.28) reported high satisfaction with the interventions with no observed differences between the two study arms. CGRA uptake at six months post-intervention was observed for 30% of women in the TCN arm, 8% in the UC arm, and 0% in the TP arm (P<0.05). Financial and insurance concerns were the most frequently reported barriers to obtaining CGRA.

**Conclusion:** Findings suggest that a personalized intervention is more effective than a targeted intervention in motivating CGRA uptake. Better addressing women's barriers to accessing CGRA services may increase the intervention's potency in our ongoing definitive RCT.



15:30 - 17:00

## 6 months follow-up of a motivational-volitional intervention for patients with breast cancer

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<sup>1</sup>Catholic University of Applied Sciences, Freiburg, Germany

<sup>2</sup>University of Education, Freiburg, Germany

Despite proven benefits of regular physical activity, many breast cancer survivors do not meet recommended physical activity guidelines. The Motivation-Volition (MoVo) Concept proved to help people set up and maintain a health-enhancing lifestyle including enough physical exercise. However, the evidence for physical inactive or little active patients after breast cancer is unclear. The main research question was whether participants of a 4x1hour group intervention including motivational and volitional aspects of behaviour change (MoVo-BnB) become more physically active than participants of the standard rehabilitation.

We conducted a prospective controlled intervention study with four measurements (before/after rehabilitation t0/t1, 6/12 months follow up t2/t3). Participants (IG: 286; CG: 314) are physically inactive women with breast cancer receiving standard inpatient rehabilitation, only the IG participated in MoVo-BnB. Up to now questionnaires (psychological, behavioural variables) were completed at t0-t2. We analysed inter group comparisons at 6 months follow up (ANCOVA; t0-controlled).

At t2, the IG shows significant enhanced values in comparison to the CG for self-efficacy (IA  $p=.01$ ;  $\eta^2=.013$ ), action and coping planning (IA  $p<.001$ ,  $\eta^2=.042$ ; IA  $p<.001$ ,  $\eta^2=.056$ ). On average the IG indicates 94 (112) minutes activity per week at t2 (t0: 12[22];  $p=.001$ ) and the CG 81 [110] minutes per week (t0: 12[20];  $p=.0001$ ); the IA is not significant. At t2, mean difference of physical activity is -12.6 (-30.3-5.0) in favour of the IG.

Up to now, findings confirm that MoVo-BnB has better potential to evoke substantial differences in process variables than the standard rehabilitation; this is not the case for physical activity.

15:30 - 17:00

## Health behaviour change through lifestyle-integrated functional training: results of a pilot study

S. Labudek<sup>1</sup>, C. Jansen<sup>1</sup>, F. Kramer<sup>1</sup>, L. Fleig<sup>2</sup>, M. Schwenk<sup>1</sup>

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<sup>2</sup>MSB Medical School Berlin, Germany

**Background:** The Lifestyle-integrated Functional Exercise (LiFE) programme is originally delivered via one-on-one home visits and contains functional balance and strength activities for preventing falls and fostering physical activity (PA) in older adults. The aims of this study are to a) apply the Health Action Process Approach (HAPA) as a theoretical behaviour change framework to the LiFE context and b) present results of a pilot study testing feasibility and acceptability of a newly developed group-based LiFE (gLiFE) format.

**Methods:** The HAPA was adapted by incorporating habit strength, psychological outcomes (e.g., autonomy), and the LiFE activities as a gateway behaviour to increase fall-risk-related functional capacity (e.g., balance, strength) as well as PA. An interdisciplinary expert team used the Medical Research Council guideline, the adapted HAPA, and behaviour change techniques to transfer contents of the original LiFE into gLiFE. A 7-week pilot study with a convenient sample (N=6, M=71.7 years, 83% women) is currently conducted. Feasibility and acceptability, i.e. practicability of the gLiFE format, perceived effectiveness and usefulness of LiFE activities and behaviour change modules (e.g., action planning, habit formation) are evaluated by means of a mixed-method approach including quantitative (Likert-scaled questionnaires) and qualitative (focus group) measures.

**Expected results:** We expect gLiFE to be feasible and highly accepted by gLiFE participants.

**Current stage of work:** The gLiFE manual has been finalized. Intervention development is being completed along the pilot study.

**Discussion:** Depending on the outcomes of the pilot study, intervention content will be adapted before implementation into a larger, subsequent trial (N=300).

15:30 - 17:00

## Intervention planning for a digital intervention to reduce risk of diabetic foot re-ulceration

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<sup>4</sup>King's College London, United Kingdom

<sup>5</sup>Northern Devon Healthcare NHS Trust, United Kingdom

<sup>6</sup>Bristol Community Health, United Kingdom

**Background:** This research aimed to develop a comprehensive intervention plan for the REDUCE maintenance intervention to support diabetic foot ulcer (DFU) patients sustain behaviours that reduce their re-ulceration risk.

**Methods:** Intervention planning was informed by theory-, evidence- and person-based approaches. Evidence was collated from a rapid scoping review and qualitative interviews with patients who previously had DFUs (N=20). This was used to understand the psychosocial context of this population, and barriers and facilitators to the intervention's target behaviours: regular foot checking, rapid self-referral following foot health changes, graded and regular physical activity, and emotional management. Guiding principles were created to orientate intervention design. Behavioural analysis and logic modelling were used to comprehensively describe the intervention and its hypothesised mechanisms and to map intervention content onto behaviour change theory (COM-B).

**Findings:** Patients' reported uncertainty regarding when to self-refer, physical limitations affecting foot checking and physical activity, and some experienced difficulties managing negative emotions. This suggested a need to increase patients' confidence in making a self-referral, and a need to acknowledge that some intervention content might be relevant to only some patients (emotional management, physical activity). The behavioural analysis identified several processes that might facilitate long-term maintenance of the target behaviours, including; increasing patients' skills, knowledge, and sense of personal control.

**Discussion:** This research provides a transparent description of the intervention planning for the REDUCE maintenance intervention. It provides insights into potential barriers and facilitators to the target behaviours and potentially useful behaviour change techniques to use in clinical practice.

15:30 - 17:00

## Patterns of weight loss and their determinants in overweight adults

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<sup>2</sup>Utrecht University, Netherlands

**Background:** Weight loss success is highly variable among individuals. Cluster analysis contributes to future intervention development by recognizing this individual variability and identifying different patterns of weight loss. Identifying determinants that differentiate between these patterns would explain the source of variability in weight loss success. Hence, we aimed to identify weight loss patterns and their demographic, biological, psychological, and behavioural determinants in overweight adults.

**Methods:** Weight of 175 overweight adults was measured at 0, 3 and 12 months and potential determinants were self-reported using validated questionnaires at 0 and 3 months. We identified patterns of weight change based on percent weight change during Phase-1 (0-3months) and Phase-2 (3-12months) using cluster analysis. We assessed determinants using multinomial logistic regression.

**Findings:** We identified three patterns of weight change: 1) low success demonstrating low weight loss achievement, 2) moderate success demonstrating successful initial weight loss in Phase-1 followed by partial regain in Phase-2, and 3) high success demonstrating initial weight loss in Phase-1 followed by continued weight loss in Phase-2. Compared to the moderate success pattern, the low success pattern was negatively associated with power of food (OR=0.48, 95%CI=0.23-1.00) and change in portion control behaviour (OR=0.28, 95%CI=0.10-0.84).

**Discussion:** Three patterns of weight loss were identified in overweight adults. Adults with greater power of food and increased portion control behaviours were less likely to have an unsuccessful weight loss pattern, indicating the importance of these factors for future weight loss interventions. Recommendations for future research on explaining weight loss patterns will be discussed.

# Smoking, alcohol, & substance use

15:30 - 17:00

Emma L Davies

15:30 - 17:00

## How do Compensatory Health Beliefs affect smoking behaviour after a quit attempt? A multilevel study

M. Amrein<sup>1</sup>, J. Lüscher<sup>1</sup>, C. Berli<sup>2</sup>, T. Radtke<sup>1</sup>, U. Scholz<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

<sup>2</sup>Columbia University, United States

**Objectives:** Compensatory Health Beliefs (CHBs) are a means to cope with conflict situations between planned health goals and craving. Such situations may appear more frequently after a quit attempt. This study examined the relationship between daily smoking-specific CHBs, intentions not to smoke, and smoking behaviour on a quit date and the days after compared to the days before the quit date.

**Methods:** Multilevel models were applied to calculate within-person and between-person associations for 83 women (Mage = 38.5, SDage = 14.6) and 83 men (Mage = 40.7, SDage = 14.5).

The main outcome measures were daily CHBs, daily intention not to smoke, and the number of cigarettes smoked.

**Results:** At the between-person level, women's rating of higher CHBs across time were associated with lower intention and with more smoking on the quit date and the days after but not before the quit date. At the within-person level, higher than usual CHBs of women on the quit date and the days after were related with less smoking. No association with intention emerged at the within-person level. No associations between CHBs, intentions, and smoking emerged for men.

**Discussion:** The negative effect of CHBs at the between-person level for smoking behaviour seems to unfold after a quit attempt and for women only. However, the temporal processes of CHBs in health behaviour change on a daily level is still unclear. Thus, future studies should further explore the daily relations between CHBs as a justification in smoking behaviour change.

15:30 - 17:00

## Living and doing health behaviour: a meta-synthesis and sub-group analysis

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<sup>2</sup>University of Derby Online Learning, United Kingdom

**Background:** We present a timely systematic review and meta-synthesis of published interpretative phenomenological analysis studies concerning lived experience of behaviours relevant to promoting physical health.

**Methods:** Databases were searched for eligible papers. Article data were translated, aggregated and analysed using an adapted meta-synthesis approach. **Findings:** Twenty-six papers were eligible. Sub-group analyses revealed themes for each behavioural domain. These included: alcohol use holds implications for how people feel about themselves; learning to balance pleasure with the rest of life; asserting choice; and alcohol as an evolving identity resource in life (alcohol use papers k = 8); spontaneity, objectification and danger as sexual excitement; taming urges and seeking compromise and navigating love, power and stigma in sexual practices (sexual activity papers, k = 10); managing health in an obesogenic environment; setting habit change in motion; health-adherence and competing life demands; and mentorship with others help (physical activity and diet papers, k = 7); and stopping smoking as losing something precious; fresh appreciation of self and others as a non-smoker; and quitting as an ongoing performance (tobacco smoking papers, k = 2). Two cross-domain 'health promotion behaviour' themes emphasised the importance of learning to balance pleasure alongside physical health and of marshalling social support and resisting conventions.

**Discussion:** Review findings suggests that conventional decision-making theoretical models miss important contextual detail relating to health behaviour experiences and can guide the development of behaviour change theory. Future IPA research should address evident imbalances of sample focus and would benefit from more longitudinal study designs.

15:30 - 17:00

## Fidelity, alcohol use and the effectiveness of the universal drug prevention program Unplugged

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<sup>2</sup>Pavol Jozef Šafárik University in Košice, Slovakia

**Background:** Fidelity of prevention programs can greatly influence their actual effectiveness. The aim of this study was to examine the effectiveness of the drug use prevention program Unplugged with respect to the fidelity of program implementation.

**Methods:** The program Unplugged, which consists of 12 lessons, was implemented in the Slovakian elementary schools. The schools were randomly assigned to experimental (EG) and control (CG) groups. Data were collected before program implementation (T1), 3 months (T2), 12 months (T3) and 18 months (T4) after. Alcohol use during the last 30 days was measured among 497 participants (M=11.45  $\pm$  59.5%girls). The number of lessons which the pupils attended (less or equal to 10 (EG1), more than 10 (EG2)) was used as an indicator of program fidelity. Binary logistic regression models were used for analyses and adjusted for gender and alcohol use in T1.

**Findings:** The pupils in EG2 reported a lower level of alcohol use in comparison to the pupils in EG1 in each measurement point. The findings indicate that the number of attended lessons is a significant predictor of alcohol use. At T2 the probability of alcohol use was lower in EG2 (OR=0.411, 95%CI 0.179-0.947) and also in CG (OR=0.452, 95%CI 0.211-0.964) compared to EG1. At T4 the probability of alcohol use was lower in EG2 (OR=0.443, 95%CI 0.208-0.947) compared to EG1.

**Discussion:** When applying this preventive program, it is important for the pupils to complete the whole program, otherwise the program may be less effective.



15:30 - 17:00

## Evidence of behaviour change in people who inject drugs on treatment for hepatitis C infection.

A. Malaguti<sup>1,2</sup>, F. Sani<sup>1</sup>, P. Dougard<sup>1</sup>, A. Eriksen<sup>2</sup>, K. Power<sup>2,3</sup>, J. Dillon<sup>1,2</sup>

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**Background:** Injecting behaviour in people who inject drugs is the main risk factor for hepatitis C virus (HCV) infection. Psychosocial factors such as living with and having a partner who injects drugs have been associated with increases in injecting risk behaviour. This study aimed to investigate injecting behaviour changes during treatment for HCV infection whilst exploring the role of psychosocial factors on patients' injecting behaviour.

**Methods:** EradiCate was a single centred clinical trial investigating the effectiveness of HCV treatment with injecting drug users between 2012 and 2017. A total of 84 participants completed a 24-week treatment, with social and behavioural measures taken at different intervals throughout treatment.

**Findings:** The most significant behaviour change in injecting frequency was observed between week 1 and week 8 of treatment,  $Z = -5.094$ ,  $p < .001$ , large effect size of  $r = -.60$ . Those who had a partner who injected and was also on treatment for HCV ( $N=22$ ) reduced their injecting frequency significantly more than those whose partner was not on treatment and ( $N=20$ ) those without an injecting partner ( $N=42$ ),  $Z = -2.312$ ,  $p = .021$ , medium effect size  $r = 0.36$ . This translated into a reduction of more than one injection a day for patients in romantic partnerships on treatment.

**Discussion:** Treating a "chaotic" population for HCV infection is not only possible, but also bears health benefits beyond treatment of HCV alone. Enrolling couples on HCV treatment when partners are sero-concordant, has shown enhanced benefits for reduction of injecting behaviour through the role of interpersonal and intrapersonal processes within relationships.

# Quality of life & well-being in chronic disease & ageing

15:30 - 17:00

Anne Hickey

15:30 - 17:00

## The predictors of positive and negative consequences after transplantation.

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**Background:** The research based on O'Leary and Ickovic Thriving Model (1995), which is an attempt to combine the contribution of psychological factors, both, in the post-traumatic and in the post-ecstatic growth.

The aim of this conducted research was the assessment of relationship between post-traumatic stress disorder and post-ecstatic growth and its psychological constituents (such as sense of coherence and positive and negative affect) examined in the population of patients who underwent kidney and liver transplantation.

**Methods:** The study included 60 patients after kidney or liver transplantation. They filled out six questionnaires: Posttraumatic Stress Disorder Checklist by Weathers et al.; Positive Effects of Transplant Scale by Anand-Kumara et al.; Sense of Coherence Scale by Antonovsky; Positive and Negative Affect Schedule by Watson and Clark and estimated Scale of the Change in Quality of Life by Zatorski.

**Findings:** The results showed that there was significant positive relationship between the post-traumatic stress disorder and negative affect, as well as between quality of life and positive affect.

The study has also indicated the negative correlation between post-traumatic stress disorder and sense of coherence (also with subscales).

Post-traumatic stress disorder (65%) could be predicted by affect (both positive and negative) and sense of coherence. Improvement in quality of life could be explained by positive emotionality (31%).

**Discussion:** Sense of coherence- especially its instrumental component, which is manageability, allows to anticipate negative changes. Positive emotions turned out to be a determinant of improvements in quality of life.

15:30 - 17:00

## Strength interventions for people with chronic diseases: a systematic review of approaches and effects

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<sup>1</sup>University of Twente, Netherlands

**Objective:** The present systematic review aims to synthesize the evidence about the features and effects of strength interventions for people with chronic mental or physical diseases. Strengths approaches assumed to be beneficial for the self-management of people with a chronic disease due to their holistic approach.

**Methods:** Relevant studies were identified in Pubmed, PsycINFO and Scopus. Studies that evaluated strength-interventions targeting a chronic mental or physical ill target group and that measured intervention effects in RCT's, quasi-experimental and pilot designs were included.

**Results:** 18 studies were included. The target group of most of these studies was people with a chronic mental illness. Only two interventions focused on chronic physical ill people. The majority of the identified interventions were based on character strengths or the Strength Model of Rapp & Goscha. All but one included interventions were able to significant enhance one of their primary outcome measures related to physical, mental or social health. Eight of the eleven controlled studies found group x time interaction effects, however not for all assessed outcome measures and not for all measurement points.

**Conclusions:** Strengths based intervention showed positive effects in dealing with a mental disease. The beneficial effects and theoretical base for applying these approaches to self-management and adaptation of people with a chronic physical disease is until now scarcely studied.

15:30 - 17:00

## Empirical Testing of the Lazarus' Hope Model

M. Małkiewicz<sup>1</sup>

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**Background:** Even though researchers have developed a variety of different hope theories assuming that hope might be a key determinant of coping activities, there is still a number of questions which require further investigation. The present study focuses exclusively on cognitive content of hope as an emotion defined by Lazarus within the framework of transactional approach and appraisal theory of emotion. Hope, referring to these, has unique cognitive content consisted of single primary and secondary appraisals and evaluations that synthesizes the key relational challenge underlying hope. Interestingly, Lazarus's hope definition do not provide for appraisals of coping potential or self- or others-accountability as an important components of this emotion. The current study tests predictions of Lazarus's hope model and its expanded version with mentioned above appraisals, which are in line with other hope theories and might be particularly useful in understanding experience of hope.

**Method:** 316 participants (195 women, 121 men; age  $M = 23,5$ ) filled in the following measures: Lazarus's Appraisal Pattern Scale (Małkiewicz, 2014) and Core Relational Theme for Hope Scale (Małkiewicz, 2014). Canonical correlation analyses (CCA) and confirmatory factor analyses were conducted to meet the goals of this study .

**Results:** Results show that Lazarus's model yielded good indexes, while expanded model revealed a mediocre fit to the data. The difference between the two models' adjustment was significant. These and CCA results led us to conclusion that appraisals of accountability and coping potentials, in addition to evaluations originally proposed by Lazarus, might also be meaningful for hope.

15:30 - 17:00

## Detecting potential gaps between patient-reported outcome criteria and instruments in telemedical settings: a systematic review

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<sup>1</sup>Universität Greifswald, Germany

**Background:** To measure the effectiveness of telemedical (TM) applications, assessing patient-reported outcomes (PROs) such as health-related quality of life (HRQoL) is essential. By now, results of reviews are inconsistent as to whether TM improves HRQoL. Previous pre-studies of our research group point to a potential gap between those outcome criteria defined to indicate treatment success from the patient's perspective and those being assessed by standardized instruments. Therefore, we are interested in whether existing PRO measures might lack sensitivity in TM settings and to which extent PRO measures covering those HRQoL domains that are ought to be improved by TM applications.

**Methods:** A systematic review is being conducted to address these research questions.

**Expected results.** To screen patient-reported outcome criteria that were defined to indicate treatment success for TM applications; to identify PRO instruments that have been applied to measure those criteria; to detect potential mismatches between definition and measurement regarding such PRO instruments.

**Current stage of work.** Recently, the search has been conducted. We will now analyze the literature; results will be presented at the conference.

**Discussion:** If mismatches between those outcome criteria defined to indicate treatment success from the patient's perspective and those being assessed by standardized instruments will be detected, it should be taken into account as potential source of inconsistencies in previous research **Findings:** Consequently, there may be a need to develop instruments more sensitive to assess HRQoL in TM contexts that complement existing PRO measures.

15:30 - 17:00

## Examination of the Relationship between Resilience, Rumination, and Subjective Well-being in Individuals with Autoimmune Disorders.

R. McNair<sup>1</sup>

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The current quantitative study examined the relationship between resilience, rumination, and subjective well-being levels in individuals diagnosed with an autoimmune disorder. Positive Health, a relatively new theoretical paradigm in health psychology framed the research question, what is the relationship between resilience, rumination, and subjective well-being in individuals diagnosed with an autoimmune disorder. Adapting to a negative health diagnosis, for example, an autoimmune disease, requires a period of adjustment and change. Emotional well-being can play a key role in the progression of the disease. Understanding the impact that differences in individual response styles have on subjective well-being is an important step in understanding what leads to positive health outcomes. Included in the analysis were 201 participants, females = 101, males = 100, age 18+ who were medically diagnosed with an autoimmune disease. The Connor-Davidson (CD-RISC) measured resilience and rumination was measured via the Rumination Response Scale (RRS). Subjective Well-Being was measured by creating a composite scale, comprised of the Positive Negative Affect Schedule (PANAS), The Oxford Happiness Questionnaire (OHQ), and the Satisfaction With Life Scale (SWLS). There was a positive correlation between resilience levels and subjective well-being levels in individuals with autoimmune diagnosis. A significant effect of resilience on subjective well-being was found,  $F(1, 199) = 163.5, p < .001$ . There was a negative correlation between rumination levels and subjective well-being levels in individuals with autoimmune diagnosis. A significant effect of rumination levels on subjective well-being levels was found,  $F(2, 198) = 132.5, p < .001$ .

15:30 - 17:00

## Quality of life and sense of coherence in stoma patients

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**Background:** Quality of life is a complex concept that may include several approaches. We examined the quality of life of stoma patients from the point of view of the individual, which is essentially subjective, and their own view of their health and well-being. Well-being is associated with a variety of research based on sense of coherence, which is a personality disposition that helps to understand the threatening factors of the outside world as challenges. Our study focuses on the characteristics of the quality of life and the sense of coherence amongst patients with stoma.

**Methods:** The sample consists of 55 stoma patients, of whom 20 are male and 35 female, the average age is 57.29 years (SD: 15.4). In addition to sociodemographic data, the SF-36 Health Survey (Hungarian adaptation Czimbalmos et al., 1999) and Sense of Coherence (SOC-13) Scale (Hungarian adaptation Balajti et al., 2007) were used to measure the quality of life. The data of the stoma patient group were compared with standard data obtained in the Hungarian adaptation.

**Findings:** Among the physical health factors of the SF-36 Health Survey there was a significant difference between the stoma patients at Physical functioning, Physical role and General health. Among the factors of mental health there was also a significant negative deviation in stoma patients in Vitality, Emotional Role and General Mental Health Factors. The Sense of Coherence Scale did not show any deviation from the standard data.

**Discussion:** The results show which points could be improved in stoma patients.



# Measurement tools & evaluation of psychological aspects of chronic illness

15:30 - 17:00

Bronwyne Coetzee

15:30 - 17:00

## Profiles of Psychological Adaptation to Spinal Cord Injury at Rehabilitation Discharge

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<sup>2</sup>University of Luzern, Switzerland

**Background:** Individuals react and cope differently with potentially traumatic events such as Spinal Cord Injury (SCI). This study aims at identifying different profiles of psychological adaptation at rehabilitation discharge using several parallel adaptation indicators (life satisfaction, depression, and anxiety). Moreover, biopsychosocial variables predicting profiles membership will be examined.

**Method:** This cross-sectional study, embedded within the longitudinal Swiss Spinal Cord Injury Cohort Study (SwiSCI) includes participants aged 16 years or older newly diagnosed with SCI and admitted for first rehabilitation in one of the four national rehabilitation centres. Currently, 407 participants completed questionnaires assessing mental and physical health, well-being and other psychosocial factors during rehabilitation. Exploratory Latent Profile Analysis will be used to identify subgroups of individuals presenting different profiles across the adaptation indicators.

**Expected results:** We expect to identify at least three different adaptation profiles: resilient (high life satisfaction, low depression and anxiety), copers (life satisfaction, depression and anxiety in moderate levels) and vulnerable (low life satisfaction, high depression and anxiety). We expect that profile membership is predicted by self-efficacy, purpose in life, appraisals, pain, and social support, but not by other biological, lesion-related, or socio-demographic factors.

**Current stage of work:** Data analysis will start in March 2018.

**Discussion:** The identification of adaptation profiles and their predicting factors will offer a precise and comprehensive description of how people react to SCI. Furthermore, this study will provide scientific basis for tailored interventions by pointing out the factors that should be targeted for specific subgroup of individuals.

15:30 - 17:00

## Cultural adaptation of the Goal Pursuit Questionnaire (GPQ) for Spanish women with fibromyalgia

A. Lledó<sup>1</sup>, M. Pastor-Mira<sup>1</sup>, S. López-Roig<sup>1</sup>, E. León<sup>1</sup>, E. Abad<sup>1,2</sup>

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<sup>2</sup>Hospital de San Vicente, Spain

**Background:** As the first step of the Spanish validation of the Goal Pursuit Questionnaire (GPQ; Karsdorp & Vlaeyen, 2011), this study aims to create a culturally adapted version for a Spanish population of women with fibromyalgia (GPQ-S). GPQ was developed in the motivational context of pain, assessing the preference for hedonic goals (mood-management or pain-avoidance goals) over achievement goals in several hypothetical situations.

**Methods:** First, a double translation/back-translation process was developed alongside two consensus meetings. Second, we conducted a cross-sectional study that included 94 women with fibromyalgia who attended the Fibromyalgia Unit. Most of them were married (65%) with primary (37.2%) and secondary studies (32%). Mean age was 51.3 (SD=10.5) and the mean of perceived pain intensity was 7.3 (SD=1.8). We conducted a: 1) group structured interview after self-administration of the GPQ (n=26), 2) a thinking-aloud study (n= 16), 3) self-administration of the situations listed in the GPQ to study their frequency in the daily-life (n=27), and 4) 25 women completed the Spanish version of the o WHYMPI part III, which scored the frequency of several daily-life activities.

**Findings:** The GPQ-S maintains 16 items but changing seven situations to maintain the conceptual equivalence in the Spanish context. Instructions and five situations were extended to increase the face validity and to solve understanding problems of patients related to the situations.

**Discussion:** The GPQ-S is both a cultural and linguistic adaptation equivalent to the original, which allows us to use in a Spanish context.

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15:30 - 17:00

## COPD patients: psychological and neuropsychological assessment in a rehabilitative setting

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**Background:** Chronic Obstructive Pulmonary Disease (COPD) is a complex multi-component disorder characterized not only by progressive irreversible respiratory effects but also by extrapulmonary comorbidities. Aim of this study is to describe psychological and neuropsychological comorbidities in COPD patients in a rehabilitative setting, with a particular attention to Mild Cognitive Impairment (MCI).

**Methods:** COPD inpatients admitted at ICS Maugeri Spa-SB, IRCCS, Institute of Montescano (PV) and Camaldoli (MI) for pulmonary rehabilitation, underwent an assessment for depressive and anxious symptoms and MCI. Instruments: Hospital Anxiety and Depression Scale (HADS), Geriatric Depression Scale (GDS) or Beck Depression Inventory-II (BDI-II), Mini Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA) and a complete neuropsychological battery (ENB-2) including different cognitive domains (attention, memory, executive functions, and perceptive and praxis abilities).

**Results:** COPD patients (n=65, 69.9±7.6 years old; stage II–IV GOLD) reported moderate-severe anxious (18.5%) and depressive (30.7%) symptoms. Our results indicate different percentages of MCI depending on neuropsychological tests: 6.2% (MMSE), 18.5% (MoCA) and 50.8% (ENB-2); MCI anamnestic (27.7%) and MCI non-anamnestic (23.1%). Logistic regression analysis revealed that only COPD severity (p=0.012, odds ratio 4.4, 95% CI: 1.4-14.0) and anxious symptoms (p=0.026, odds ratio 4.6, 95% CI: 1.2-17.7) were identified as significant and independent predictors of the deficit in the Copy drawing test, which assesses visuospatial and praxis skills.

**Conclusion:** In COPD patient's rehabilitation, it is suggested to adopt in usual clinical care screening tools regarding mood, cognitive aspects and anxiety to detect multisystem symptoms in order to avoid overlapping and underestimation of these important comorbidities.

15:30 - 17:00

## Neuropsychological and psychological aspects in Myotonic Dystrophy Type 1 patients

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**Background:** Myotonic Dystrophy type 1 (DM1) is characterized by a multi-systemic organ involvement including cognitive impairment. Specific personality traits were identified in these patients. The purpose of this study is to evaluate the cognitive performance and the psychological aspects of these patients, correlating results to genetic and clinical data.

**Methods:** 26 patients (11 females) undergoing neurological evaluation were screened for neuropsychological deficits (MMSE Mini-Mental State Examination, Frontal Assessment Battery (FAB) memory (STM, LTM, working), integration capacities, visual-spatial ability, attention (selective, divided, alternate) executive functions, praxis, discrimination and logic capabilities) and psychopathology Symptom Check List 90-R. Results obtained were correlated to CTG triplet expansion, age at onset, disease duration, MIRS, MRC and Epworth Sleepiness scales.

**Findings:** No correlation was found when comparing the genetic and clinical variables with cognitive performance and psychopathology data. Females had no cognitive impairment and showed a better resilience with no evidence of psychopathological traits. Unemployed women got results in the lower limits of the norm in the global neuropsychological assessment and in the FAB. Men showed signs of psychopathological traits in 7 out of 9 areas with levels in the high/moderate range.

**Discussion:** Females showed a better psychological functioning than males possibly indicating that being male could be a risk factor for psychopathology. Occupation could be a protective factor when it comes to cognitive impairment.

15:30 - 17:00

## Development and validation of a self-report measure of practical barriers to adherence (PBAQ)

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**Background:** Understanding practical drivers of medication adherence is key for addressing non-adherence. There are no self-report measures specifically for practical barriers. This study reports the development and validation of a self-report measure that assesses practical adherence barriers (PBAQ).

**Methods:** A 17-item self-report measure assessing practical adherence barriers was developed using a prior systematic review. Responses were measured using a 5-point Likert scale (higher scores indicate lower practical barriers) and included reversed phrase items to reduce response bias. Initial face validity and internal reliability were evaluated in patients with Type-1 (T1D) and Type-2 (T2D) diabetes from a patient group. Convergent validity was assessed in patients recruited via mTurk using the Medication Adherence Report Scale (MARS).

**Findings:** A total of 15 people (5 T1D; 10 T2D) completed PBAQ (46% female; mean  $\pm$ SD age 64  $\pm$ 12 years; mean length of diagnosis 41  $\pm$ 25 years for T1D and 17  $\pm$ 5 years for T2D). The questionnaire was well accepted by patients, confirming face validity. The questionnaire showed good internal reliability ( $\alpha = 0.94$ ). Following this, 128 people completed the questionnaire on mTurk (69% female, mean age 22  $\pm$ 13 years; mean length of diagnosis 20  $\pm$ 25 years). The questionnaire retained satisfactory internal reliability ( $\alpha = 0.89$ ), and showed evidence of convergent validity with MARS – higher adherence was associated with lower practical barrier scores ( $r=0.56$ ,  $p<0.0001$ ).

**Discussion:** These results indicate PBAQ is a reliable and valid self-report measure of practical adherence barriers. This can be used to inform adherence intervention development, tailored to patients' specific needs.

# Psychological & emotional aspects of chronic disease

15:30 - 17:00

Karen Morgan

15:30 - 17:00

## The influence of personality traits on anxiety and coping in glaucoma and diabetic retinopathy patients

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Chronic ophthalmologic disorders, such as glaucoma and diabetic retinopathy, are irreversible visual field disorders, which can ultimately lead to blindness. Awareness of the risk of blindness, plus daily concern for treatment, diet and high morbidity in diabetes, all add to the anxiety and sense of vulnerability of patients.

The present paper draws on personality traits-anxiety research and highlights ways of coping in 50 patients diagnosed with glaucoma and 34 patients diagnosed with diabetic retinopathy, from a quantitative, transversal perspective. We proposed eight research questions and applied three tools for evaluation: IPIP - International Personality Item Pool, SCBAI – Somatic, Cognitive, Behavioral Anxiety Inventory și SACS – Strategic Approach to Coping Scale.

Our findings suggest a statistically significant relation between certain personality traits and specific coping modalities. Thus, emotional stability guides the person towards an action-based coping, a realistic perception of the situation and mobilizes it to keep the condition under control. At the same time, we found that people with glaucoma have a higher level of anxiety than those with diabetic retinopathy, the latter adopting an assertive coping. Regarding the influence of personality traits on anxiety, the findings reveal a complex relation, stemming from the person's distorted image of the disease, fears about its evolution and the adjacent treatment.

The work opens the way for future research on the influence of emotional intelligence, self-esteem, defense mechanisms and social support on anxiety, and can be an effective guide for health psychologists or physicians treating these conditions, contributing to better patient relationships.



15:30 - 17:00

## Health-related quality of life in Chilean women with Sjögren's Syndrome

M. Rios-Erao<sup>1</sup>, A. Herrera<sup>1</sup>, C. Bustos<sup>1</sup>, I. Espinoza<sup>1</sup>, P. Wurmman<sup>1</sup>, L. Leiva<sup>1</sup>, G. Rojas-Alcayaga<sup>1</sup>

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**Background:** Sjögren's syndrome is a chronic autoimmune disease that has an effect on physical activity, intimacy, work, daily activities and social life. Most of the investigations focused on the physical impact and leave the quality of life of these patients in the Background: The objective of this study was to determine the health related quality of life in Chilean women with Sjögren's syndrome.

**Methods:** It is a descriptive, non-experimental study, with an intentional sample. A sample of 30 women, with a diagnosis of Sjögren's syndrome was included in this study, and will fill a battery of questionnaires, included sociodemographic data. To assess health related quality of life a EQ-5D-5L will be use. For data analyses, a non-parametric statistics will be use, including frequency tables and chi square test, with an error of 5%

**Expected results:** It is expected that the surveyed patients show limitations in the indicators of health related quality of life associated with mobility, self-care, habitual activities, pain / discomfort and anxiety / depression.

**Current stage of work:** We are in the stage of collecting information, applying the surveys to the patients.

**Discussion:** The Sjögren's syndrome is a disease that although it does not have as much prevalence as other autoimmune diseases, the interference with daily activities is important to patients. Knowing the consequences in different dimensions of this disease allows to health providers a more comprehensive approach, achieving a complete understanding of the disease process.

15:30 - 17:00

## Patient-related barriers in the uptake of psychological care in cancer patients with depressive symptoms

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**Background:** Of all cancer patients, 25% experiences depressive symptoms. Despite effective treatments being available, 75% of these patients refuses care. This is a problem since untreated depressive symptoms may negatively impact quality of life, disease management, and longevity. Why so many do not want care is not clear yet. One reason could be that the offered care does not fit patients' symptoms, given the wide range of depressive symptoms. This study will therefore examine which depressive symptoms are most central in cancer patients and if the care currently offered matches patients' needs.

**Methods:** This study uses a self-report questionnaire and a time-series diary method. We will approach patients (N = 125) who completed curative treatment for a primary cancer diagnosis at least three months ago and are experiencing mild levels of depressive symptoms (PHQ-9  $\geq$  5). They fill in a self-report questionnaire at the start of the study measuring depressive symptoms, care needs and history of depression. Patients then fill in a diary questionnaire five times a day for two consecutive weeks measuring depressive symptoms and daily functioning. Using a multilevel Vector Autoregressive (VAR) analysis, a network visualization of the depressive symptoms will be constructed.

**Expected results:** The results will show which depressive symptoms are most central in cancer patients, both from a statistical and a patient perspective.

**Current stage of work:** We plan to start data collection mid-2018.

**Discussion:** Knowing which depressive symptoms are most central in cancer patients can help in optimizing psycho-oncological care for depressive symptoms.

15:30 - 17:00

## The effect of interoceptive awareness on Depressive Mood and Reward Perception

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Previous studies have reported that individuals with major depressive disorder show inaccurate interoceptive awareness. Theoretical model suggests that improvement of interoceptive awareness would cause improvement of reward perception and depressive symptoms; however, there is no empirical study supporting these relationships. Therefore, the present study examined the effect of the improvement of interoceptive awareness on depressive mood and reward perception.

Forty-three university students (32 woman, mean age = 23.0±2.9) were randomly assigned to experimental group and control group. In order to manipulate interoceptive awareness, participants in experimental group were instructed to try to tune their internal somatic sense to the SCR waveform presented on a display. On the other hand, participants in control group were just instructed to keep relaxed. Before and after these manipulation, participants completed reversal learning task to measure reward perception, and self-rated depressive mood scale. To examine the effect of the manipulation on reward perception and depressive mood, two-way mixed ANOVAs with group and time were performed.

A marginally significant decrease of depressive mood was observed following interoceptive awareness manipulation in experimental group ( $p = .07$ ), while no significant effect was observed in control group. In addition, a marginally significant improvement of reward perception was observed in experimental group ( $p = .06$ ), while not in control group.

Findings suggest that improvement of interoceptive awareness would decrease depressive mood through improving reward perception. This study also suggests that activities to improve interoceptive awareness such as physical exercise and mindfulness training should be more emphasized in treatment of depression.

15:30 - 17:00

## Personal resources - resiliency and hope and flexibility in coping with stress among oncological patients

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**Background:** The diagnosis of oncological disease is difficult and stressful situations. The ones struggling with it require a lot of effort to find ways of coping. In this case it is particularly important to have a wide range of coping strategies and an ability to abandoning ineffective methods of coping and seeking more effective alternatives. Adapting to critical life events is facilitated by personal and social resources by increasing the efficiency of coping with stress.

**Methods:** The 121 inpatients treated for oncological disease were examined (71 women, 50 men). Age of participants was in the range of 23 to 86 years ( $M=58$ ;  $SD=11.27$ ). The following methods were used: Resiliency Scale (SPP-25) by Ogińska-Bulik and Juczyński, Adult Hope Scale by Snyder & colleagues and the Flexibility of Coping Questionnaire (FCQ-14) by Basińska & colleagues.

**Findings:** Resiliency and hope were strongly positively related to flexibility of coping. Both allow to predict flexibility in coping in 22% ( $Adj. R^2 = 0.219$ ,  $F(2,117)=17.710$ ;  $p<0.001$ ). Resiliency plays significant role ( $B=0.48$ ;  $p<0.0001$ ). The model including resiliency and hope subscales was also significant and allowed to predict the variance of flexibility in coping in 20% ( $Adj. R^2 = 0.205$ ,  $F(7,112)=5.390$ ;  $p<0.001$ ). Dimension of resiliency - openness to new experiences and a sense of humour - was found as the strongest predictor ( $B=0.286$ ;  $p=0.031$ ).

**Discussion:** The results of this study suggest that personal resources facilitate flexibility in coping for oncologically ill patients. It proves significance of psychological interventions focused on reduction of emotional tension and employment of personal resources.

15:30 - 17:00

## Psychological well-being in patients with obstructive sleep apnoea: the role of hostility and coping

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**Background:** Sleep-related symptoms in Obstructive Sleep Apnoea (OSA) may increase hostility, which may consequently potentiate the negative health consequences of OSA. For psychological well-being, coping may represent one of the key determinants in adaptation to sleep disorders. The aim of this study was to assess whether hostility and coping strategies are associated with psychological well-being in OSA patients when controlled for sociodemographic, clinical and sleep-related variables. Furthermore, we examined whether coping strategies mediate the association between hostility and psychological well-being.

**Methods:** Participants in this cross-sectional study were 150 OSA patients (Apnoea-Hypopnoea Index–AHI $\geq$ 5; 68% male; mean age 48.9 $\pm$ 9.5years). All patients completed the General Health Questionnaire-28, the Cook-Medley Hostility Scale, the Coping Self-Efficacy Scale, the Pittsburgh Sleep Quality Index and the Epworth Sleepiness Scale. Data were analysed using multiple linear regression and mediation analyses.

**Findings:** The regression models for hostility, ability to get support, problem-focused coping and coping focused on stopping unpleasant emotions and thoughts explained 59%, 63%, 67% and 70% of the variance of psychological well-being, respectively. All assessed coping strategies mediated the association between hostility and well-being. Coping focused on stopping unpleasant emotions and thoughts showed the strongest association with psychological well-being.

**Discussion:** Hostility and poor coping strategies were strongly associated with psychological distress in OSA patients. Both active and passive coping strategies may be effective against the risk of developing psychological distress. Interventions focused on reducing hostility and enhancement of effective coping strategies may help to optimize psychological well-being in OSA patients [Grant support APVV-15-0719].

15:30 - 17:00

## Do preoperative depression and disordered eating patterns influence weight changes among post-bariatric surgery patients?

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Bidirectional depression-problematic eating associations are documented in obese populations. However, such evidence is inconclusive in patients undergoing bariatric surgery. This study evaluated whether preoperative depression and disordered eating were associated with postoperative weight (absolute weight [Kg]; body mass index [BMI]) and weight changes (post – presurgery); and whether preoperative depression correlated with disordered eating in bariatric patients. 188 patients undergoing bariatric surgery (77% Women; M[SD] Age=44.3[11.5] yrs; M[SD] BMI=49.3[8.8] kg/m<sup>2</sup>) from the REBORN (REsearch on Bariatric care for Obesity tReatmeNt) cohort participated. Patients underwent a medical interview, had their height and weight measured, and completed the Beck Depression Inventory (BDI-II) and the Dutch Eating Behavior Questionnaire (DEBQ) at their 6-month pre and post-operative visits. GLMs were performed, adjusting for age, sex and antidepressant use. BDI-II was not associated with weight, BMI or weight changes post-bariatric surgery ( $p$ 's  $>.05$ ). However, there was a negative association between DEBQ-external eating and weight change ( $\beta=-10.21$ ,  $p=.036$ ) and a trend for a negative association between DEBQ-emotional eating and weight change ( $\beta=-6.29$ ,  $p=.077$ ). Moreover, increased preoperative depressive symptoms was associated with increased preoperative emotional ( $\beta=6.06$ ,  $p<.001$ ) and external ( $\beta=0.02$ ,  $p=.002$ ) eating. Preoperative depressive status may not significantly impact weight, BMI nor weight changes 6-months following bariatric surgery. However, preoperative emotional and external eating patterns, i.e., eating in response to unpleasant emotions such as anger and sadness and/or food-related stimuli, may negatively impact weight loss postoperatively. Psychological assessment of bariatric candidates should be considered to ensure adequate support of those at risk of suboptimal postsurgical outcomes.

15:30 - 17:00

## Self-compassion, adaptive reactions, and health behaviours among people with prediabetes and diabetes: A systematic review

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Diabetes and prediabetes are associated with poor health outcomes. Health promoting behaviours (HPB) can decrease these risks. Self-regulating HPB is challenging especially among those with (pre)diabetes as they must self-regulate in the face of a health threat. Self-compassion (SC), extending care to oneself in difficult times, promotes self-regulation and should help people with (pre)diabetes self-regulate HPB. We systematically reviewed research on SC and self-regulation of and engagement in HPB in (pre)diabetic patients. Selected studies involved adults diagnosed with pre-diabetes, diabetes, and/or gestational diabetes, and examined SC and HPB, health management behaviours, self-regulation and/or participants' responses to being (pre)diabetic. Studies were excluded if they were qualitative. The search strategy was designed by a librarian and used in the following databases: MEDLINE(R); Embase; PsycINFO; Scopus; Web of Science; and SPORTDiscus. Two reviewers independently screened the title, abstracts, full-text articles and extracted data. Five articles were included (one randomized control trial (RCT), three cross-sectional and one conference abstract). Participants were mostly women (63.6 – 81%) with a mean age of 37-56.2 years. SC was associated with engagement in HPB and psychological well-being, and negatively associated with depression and diabetes-specific distress. The RCT found that those in the SC intervention significantly decreased depression and diabetes-specific distress compared to the control. Results suggest that SC is beneficial for psychological and physical well-being among those living with diabetes. No research has examined these outcomes among pre-diabetes and only one study employed a RCT. Future research may want to explore these avenues.

# Psycho-social issues & chronic disease

15:30 - 17:00

Noelle Robertson



15:30 - 17:00

## BREAST CANCER AND YOUNGER WOMEN: NARRATIVE MARKERS OF COPING DURING MEDICAL TREATMENT PHASES

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The onset of breast cancer for a younger women is considered a traumatic experience that risks to impairing the women's quality of life and/or to transit into psychopathological outcomes even years after the end of treatments.

The meaning-making processes of a traumatic experience, mediated by the narration, appears in the literature as key aspects to promote psychic elaboration and construction of well-being. The research project IMPRONTE aims to highlight narrative and diachronic markers of coping the breast cancer traumatic experience studying the narration as a device that promotes different functions, as a processes of meaning-making, during the different phases of medical treatment. The research is carried out with the Clinical Psychology and Breast Surgery of the Pascale Hospital of Naples. The data collections is composed by the women with non-metastatic infiltrating ductal carcinoma that the researchers will meet during 4 key moments of the therapeutic process: pre-hospitalization; post-operative counselling; I adjuvant therapy; follow-up. Each meeting provides by a narrative audio-recorded interview to understand the subjective breast cancer experience and the way to go through the treatments and it is accompanied by the administration of outcome and process measures. Preliminary statistical analyses show diachronic narrative markers, both functional and dysfunctional, that highlight different trajectories of meaning-making, from disorganization to a connection with the experience, related to the different phases of care. From a personalized medicine point of view, preliminary results allow us to be able to reflect on clinical support practices specific for our vulnerable target.

15:30 - 17:00

## Using internet to obtain information about an unknown disease; the case of the Sjögren Syndrome

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**Background:** Sjogren Syndrome (SS) is a chronic autoimmune disease of low prevalence therefore little-known by the population. Most of the patients take note about this disease at the time of diagnosis. The need of information drives to patients to search it via the Internet. The aim of this study was to identify the psychological reaction of women with SS when internet is used to obtain information about the disease.

**Methods:** In depth-interview were carried out in women with SS considering a phenomenological approach. The interviews were analyzed under Grounded Theory principles. Three researchers participated in the production of categories and the discussion about the internet as information source of SS.

**Findings:** The use of internet as information searching tool is frequent among patients. The fear and disorientation are the main psychological response to available information in internet due to serious consequences of disease showed in web sites; in addition patients consider tragic and extremely severe the information about SS. On the other hand, information searched is rarely share with health professionals.

**Discussion:** Web sites are not enough useful as information searching tool because while provide a solution for lack of information conversely lead to emotional reaction that undermine psychological comfort of patients. The communication and discussion with health professionals seems a key issue for better clinical management of SS.

15:30 - 17:00

## Ambulatory care point influence on quality of life and psychological well-being in heart failure patients.

K. Piotrowicz<sup>1</sup>, P. Krzesiński<sup>1</sup>, A. Stańczyk<sup>1</sup>, J. Jastrzębski<sup>2</sup>, G. Gielerak<sup>1</sup>

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Heart failure (HF) frequency in European population is assessed for 0.4-2%. This disease is characterized by high morbidity and mortality rate, frequent hospitalizations, poor quality of life and undefined aspects of psychological well-being. The aim of our study is to implement A new Model of medical care with Use of modern methods of non-invasive cLinical assEssment and Telemedicine in patients with heart failure (AMULET study) .

The objective is to assess the influence of AMULET intervention on cardiovascular adverse events in comparison with usual care with the particular influence on: quality of life ( measured by SF-36 questionnaire and Minnesota Living with Heart Failure questionnaire) as well as psychological well-being (measured by PERMA questionnaire)

Design: Multicenter, prospective, randomized (1:1), open-label and controlled, parallel group study with follow-up of 12 months.

Procedure: In empiric group the patients are recommended to visit physician/cardiologists in existing healthcare system. In intervention group the physicians will perform remote teleconsultations based on the regular patients' assessment in ambulatory care point (ACP), realized by trained nurses. In both groups the questionnaires are distributed.

Sample Size : The group size was initially estimated as 296 subjects per group on base of prognosis of 30% reduction of primary endpoint occurrence in intervention group ( $\alpha$ -error 5%, a discriminating power 80%).

Discussion: Findings from Amulet study will assess the quality of life and to determine the aspects of psychological well-being in patients with heart failure. This will help better tailored the psychological support for these patients.

15:30 - 17:00

## Health literacy associations with selected health status indicators among patients with cervical dystonia: preliminary results

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**Background:** Cervical dystonia is relatively rare chronic condition and associations of health outcomes and patients' adherence with health literacy has not been studied yet. The aim of our study is to examine the associations of HL with selected health status indicators in sample of cervical dystonia patients in Slovak.

**Method:** Cross-sectional study on 80 patients (25.0% of males, mean age=60.2, SD=13.2) with cervical dystonia was conducted as a part of preliminary analysis during ongoing data collection. Data on demographics, 9 domains of health literacy (HLQ), self-rated health (SRH), global clinical impression (GCI), frequency of hospitalizations and mobility were collected by questionnaire. The effects of HL on health indicators were analysed using ordinal regression and ANOVA.

**Findings:** We found that most of 9 HLQ domains were not significantly associated with assessed health indicators. But we found significant association of low ability to navigate in health care system to be associated with better SRH (ordinal regression estimate -2.12,  $p < 0.05$ ), low scoring in GCI (2.70,  $p < 0.01$ ), low social support for health to be associated with no hospitalizations (ANOVA  $F = 2.9$ ,  $p < 0.05$ ), and low ability to find good health information with using walking stick or crutch (ANOVA  $F = 4.0$ ,  $p < 0.05$ ).

**Discussion:** Our findings on partial sample of cervical dystonia patients suggest that health literacy is not a significant predictor of the selected health indicators except several individual domains (ability to navigate in health care system, social support for health and ability to find good health information).

15:30 - 17:00

## Examining adaptation after stroke using the model of selection, optimisation and compensation

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**Background:** Determining the best ways of helping people come to terms with life after stroke has emerged as an important research priority. Theoretical frameworks have rarely been employed to examine post-stroke adaptation however, and little is known about how stroke survivors manage and what strategies they use to manage. This study examined the utility of the Selection, Optimisation and Compensation (SOC) model of aging in understanding the post-stroke adaptation strategies adopted by stroke survivors.

**Method:** Thirty stroke survivors (20 male), between 3 and 65 months post-stroke, took part in a semi-structured interview. Activities and body functions from the International Classification of Functioning, Disability and Health (ICF) Core Measurement Set for Stroke identified problematic activities and participants elaborated how they had addressed the difficulties encountered whilst performing or attempting to perform each problematic activity. Responses were independently coded (2 coders) against the theoretical definitions of selection, optimisation and compensation strategies.

**Results:** Responses could be reliably coded to the definitions of selection, optimisation and compensation strategies ( $\kappa = 0.96$ ). 149 distinct SOC strategies were identified and collated into 7 selection categories, 9 optimisation, and 7 compensation categories.

**Discussion:** Consistent with SOC strategy use in other chronic conditions, stroke survivors were found to develop a range of adaptation strategies that could be categorised according to the SOC framework. These included focusing on the most important goals and activities, working towards goals and activities using a range of optimisation strategies, and employing compensatory behaviours and aids to continue functioning despite a loss of resources.

# Psychometric properties of measures in health psychology

15:30 - 17:00

Karen Matvienko-Sikar

15:30 - 17:00

## The Flexibility Coping Questionnaire - 14 (FCQ - 14 ) in Polish adolescents

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<sup>1</sup>Kazimierz Wielki University, Poland

**Background:** The coping flexibility is an essential element of adaptation (Kato, 2013, Cheng, 2001, Basińska, 2015). The polish Flexibility Coping Questionnaire - 14 is a new tool for measuring this construct. The aim of the study was to check if the questionnaire is accurate in the youth group.

**Method:** The study is based on the Flexibility Coping Questionnaire – 14 contains a three-factors structure and includes subscales: Repertoire, Variability and Reflexivity, they are significant for adults. FCQ – 14 consists 14 items, which are the part of the 3 factors (RMSEA = 0.065).

**Results:** The Flexibility Coping Questionnaire – 14 meets the criteria of reliability ( $\alpha = 0.89$ ), his internal accuracy in the youth group is moderate (RMSEA = 0.068 <0.052, 0.082>). The three-factors structure of the questionnaire explains above 59% of the total variance in group of adolescents, but the configuration of factors is different. Relevant factors in group of youth are: Repertoire ( $\alpha = 0.87$ ), Coping Competences ( $\alpha = 0.69$ ) and Reflexivity ( $\alpha = 0.72$ ).

**Conclusions:** Characteristic structure factors of FCQ – 14 in youth group is different than the structure in adults. The characteristic of the Variability subscale was not confirmed in group of adolescents. Significant factors for young people are: Repertoire, Coping Competences and Reflexivity. The analysis confirmed the accuracy of the FCQ – 14 for coping flexibility measurement in adolescents. Coping Competences scale indicates that the evaluation of own ability to cope with stress is important for a flexible coping way in group of adolescents.

15:30 - 17:00

## Examination of the brief smoking consequences questionnaire-adult: information related to its psychometric properties

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**Background:** Assessment of outcome expectancies about smoking has been conducted with use of original, shortened or revised versions of Smoking Consequences Questionnaire (SCQ). However, neither SCQ nor other versions have been adapted into Turkish. Since there has been a lack of instrument explaining so many types of smoking outcome expectancies in Turkish smokers, the aim of this study was to examine Turkish version of Brief SCQ-Adult scale and its factor structure.

**Method:** The study was conducted with 516 Turkish smokers. They were reached via the internet and they filled shared the link of questionnaire sets.

**Findings:** Depending on previous research with BSCQ-A (Rash & Copeland, 2008), two models (10-factor model and 4-factor model) were chosen to compare. Results indicated that 10 factor solution provided a better fit of the data ( $\chi^2$  (230, N = 516) = 588.70,  $p = .00$ ,  $\chi^2/df \approx 2.55$ , NNFI = .95, GFI = .91, AGFI = .88, PGFI = .65, CFI = .96, RMSEA  $\approx .06$ , 90 % CI [.05, .06]).

**Discussion:** It was aimed to conduct the study of Turkish translation and adaptation of SCQ-A and to examine a brief form of SCQ-A that would keep reliability and validity as being in previous studies when restricting the weight of completion for participants. With this goal, 10-factor model as parallel with the original study was selected as the optimum fit of data as compared to other models. Subscales of BSCQ-A showed good internal consistency and there is initial evidence for its validity in Turkish culture.



15:30 - 17:00

## Personality structure measured by BFI-10 cannot be replicated in Portuguese dialysis patients

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<sup>2</sup>Fresenius Medical Care, Italy

**Background:** End stage renal disease (ESRD) patients have to undergo kidney replacement therapies such as haemodialysis (HD) for survival. These patients report lower quality of life (QOL) than the general population. Personality might affect QOL and validation of personality inventories among ESRD patients is incomplete. Hence, we aimed at evaluating the psychometric properties of the BFI-10 in HD patients.

**Methods:** 2502 Portuguese HD patients participated within a larger survey assessing QOL. Respondents were patients of healthcare provider NephroCare. The BFI-10 (Big Five Inventory - 10) was used as personality questionnaire measuring extraversion, neuroticism, conscientiousness, agreeableness and openness. Principal component analyses (PCA) with varimax rotation were conducted to assess internal structure of the BFI-10. Cronbach's alpha was used to test internal consistency.

**Findings:** Scree plot indicated a five or two component solution, explaining 67% or 35% of variance, respectively. PCA with varimax rotation for five components replicated extraversion ( $\alpha = .15$ ), openness ( $\alpha = .06$ ) and neuroticism ( $\alpha = .17$ ). Agreeableness and conscientiousness were not replicated; seemingly positive or negative item framing influenced responses. Correspondingly, the rotated two factor PCA resulted in scales which could be interpreted as tendency to rate oneself positively ( $\alpha = .45$ ) or tendency to rate oneself negatively ( $\alpha = .54$ ).

**Discussion:** We could not replicate the presumed 5 factor personality structure. Statistical pitfalls in instrument validation such as intrusion of biased self-ratings with personality traits should be addressed. Generalizability of the BFI-10, a questionnaire validated in student populations, cannot be assumed in ESRD populations.

15:30 - 17:00

## Core Outcome Sets and Health Psychology

K. Matvienko-Sikar<sup>1</sup>, M. Byrne<sup>2</sup>, P. Kearney<sup>1</sup>

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**Background:** Insufficient attention to outcome choice in healthcare trials hinders evidence syntheses and interpretations of intervention effectiveness. Core Outcome Sets (COS) represent the recommended minimum outcomes to measure in clinical trials for a specific health area. Important synergies between health psychology and COS development, using the example of development of an infant feeding COS for child obesity prevention interventions.

**Methods:** Development of the infant feeding COS involved four stages: 1) systematic review of outcomes in the extant literature; 2) small face-to-face group meeting with stakeholders; 3) e-Delphi survey of expert stakeholders; 3) consensus meeting with expert stakeholders. Stakeholders were researchers, healthcare professionals, parents, and childcare professionals.

**Findings:** The systematic review identified 82 infant feeding outcomes, categorised into 9 outcome domains: 'breast and formula feeding', 'introduction of solids', 'parent feeding practices and styles', 'parent knowledge and beliefs', 'practical feeding', 'food environment', 'dietary intake', 'perceptions of infant behaviour and preferences', and 'child weight outcomes'. Outcomes were clarified and amended with 13 international stakeholders at a small group meeting. The e-Delphi study and consensus meeting were completed by 169 and 10 international stakeholders respectively.

**Discussion:** Health psychology significantly contributes to COS development in terms of key health areas encompassing diverse health outcomes. Individual health behaviours and behaviour change are often central to COSs, as observed in the infant feeding COS. Health psychology can also make important methodological contributions to COS development. Incorporating health psychology perspectives and approaches can improve COS development, evidence syntheses and evaluation of health interventions in health psychology.

15:30 - 17:00

## Psychometric validation of the Dutch Rivermead Post-Concussion Symptoms Questionnaire (RPQ) after Traumatic Brain Injury (TBI)

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**Background:** Traumatic brain injury (TBI) is one of the most common neurological conditions. It can have wide-ranging physical, cognitive and psychosocial effects. Most people recover within weeks to months after the injury, but a significant proportion of these are at risk to developing longer-lasting post-concussion symptoms (PCS) at a later stage. The Rivermead Post-Concussion Syndrome Questionnaire (RPQ) is a short validated 16-items self-report measurement-instrument to evaluate post-concussive symptoms. The aim of this study was to test the psychometric characteristics of the Dutch version of the RPQ.

**Methods:** A cross-sectional study of 472 consecutive patients six months after they presented with a head injury in seven medical centers in the Netherlands (N=397), and two in Belgium (Flanders) (N=75). This study is part of CENTER-TBI, a large prospective longitudinal observational European-study. To determine the psychometric characteristics of the Dutch RPQ at six months post TBI, factor structure was assessed (exploratory and confirmatory). Reliability via Cronbach's  $\alpha$  and predictive validity by comparing RPQ scores of patients after mild vs. moderate and severe TBI.

**Findings:** The Dutch version of RPQ showed excellent psychometric characteristics: high internal consistency (Cronbach's  $\alpha$  .93), and good construct validity, being sensitive to self-reported recovery status at six months post TBI and initial TBI-diagnosis sensitive. Moreover, the data showed a good fit to the three dimensions structure of separate cognitive, emotional and somatic factors, reported elsewhere.

**Discussion:** The Dutch version of RPQ can be applied for research purposes and in daily clinical practice to help identifying PCS after TBI.

15:30 - 17:00

## Validation of Slovak Version of the Irrational Health Belief Scale

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**Background:** Irrational Health Belief Scale (IHBS) measures health-related cognitive distortion that was found inversely related to various health behaviours, including treatment adherence. The purpose of the intended research is to provide initial validation of Slovak translation of the 20-item IHBS.

**Methods:** In line with the validation study of the original version, about 400 undergraduate students will complete the IHBS as well as a health behaviours scale derived from Personality Lifestyle Questionnaire; Big Five Inventory 2; Positive and Negative Affect Scale; and Multidimensional Health Locus of Control Scale. Bivariate correlations of the measures with IHBS will be calculated. Additionally, hierarchical linear regression analysis will be performed in order to assess incremental validity of the IHBS regarding its ability to predict health behaviours. Also internal consistency (Cronbach's Alpha) and test-retest reliability (Pearson's  $r$ ;  $N = 65$ ) of the IHBS will be measured.

**Expected results:** We expect at least satisfactory reliability of the measure. Its higher scores are expected to be weakly to moderately associated with lower conscientiousness, weaker internal health locus of control beliefs, and greater negative affectivity. Greater cognitive distortion should be uniquely and significantly associated with a less positive pattern of health practices.

**Current stage of work:** Pilot data collection in progress.

**Discussion:** With the validation of the Slovak version of the IHBS, we hope to gain a valuable instrument for assessing health-related cognitive distortions. The data could also prove useful in designing a briefer but similarly valid version of the scale in the future.

# Just Do It: Lifestyle Health Behaviour Intervention

15:30 - 17:00

Benjamin Gardner

15:30 - 17:00

## Scoping reviews: causes of non-adherence in people with Multiple Sclerosis and response to intervention

C. Moloney<sup>1</sup>

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**Background:** For people with relapsing remitting multiple sclerosis (RRMS), disease modifying therapies (DMTs) can be effective. However, optimal outcomes are not always achieved due to poor adherence. This review aimed to understand which drivers of non-adherence have been responsive to intervention.

**Methods:** A 2-part scoping review was conducted to: (1) determine drivers of non-adherence in people with RRMS; (2) explore the impact of addressing these drivers through intervention. The COM-b framework for adherence and BCT taxonomy were used to operationalize the Findings: Literature was limited to studies in the English language from 1994 onwards. Search last run, September 2016.

**Findings:** Review 1: From 33 studies, 69 discrete adherence drivers were identified. To aid operationalisation, those appearing more than once (n=29) were taken forward as the basis for intervention mapping. Review 2: Four studies that had successfully addressed one or more identified drivers were included. Only 8 factors had been targeted by intervention. No studies demonstrated a significant relationship between change to the factor(s) targeted and adherence outcomes.

**Discussion:** The findings from this 2-part review suggest there is little cohesion between research exploring drivers of non-adherence to DMTs, and research aiming to modify adherence. Insights from the first review identified adherence correlates that were inconsistent and often unmodifiable. In contrast, successful adherence interventions targeted a narrow range of drivers but used exploratory techniques to understand individual differences and aimed to teach patients skills to support on-going disease and treatment management. Links between targeted drivers and adherence outcomes need to be explored.

15:30 - 17:00

## An educational intervention to reduce epilepsy related stigma

I. Hudecová<sup>1</sup>, R. Masaryk<sup>1</sup>

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Disease-related stigma is a public health issue affecting the sufferers' health and overall well-being. Public perception around epilepsy can be reduced by performing educational interventions with healthful individuals. This paper addresses the issue of public perception around epilepsy patients. The purpose of this study was to compare the effectiveness of two types of educational interventions on reducing epilepsy-related stigma within children aged 7-11. None of them were diagnosed with epilepsy nor were any of their close family members. The children were divided into two groups, each undergoing different intervention. Each participant completed a simple online questionnaire covering knowledge and prejudice regarding epilepsy before every lesson. The first group (n1=100) saw a video, the second group heard the same content in the form of a narrative (n2=97). The children filled out the online questionnaire again after the intervention. Results showed significant increase in knowledge and decrease in prejudice after the intervention, in both groups. The type of intervention played no role in reducing epilepsy-related stigma. Age, gender and type of school had no effect on the results either. Educational intervention seems to be an effective tool in reducing epilepsy-related stigma in children and could be included in public health related educational curricula.

The study is a part of the Grant APVV-17-0536: Social representation of dementia and their implication for the support of cognitive health in Slovakia.

15:30 - 17:00

## Feasibility Study- Individual Physical Activity Behaviour Change Intervention for Breast Cancer Survivors within the NHS.

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**Background:** Breast cancer related mortality is inversely related to physical activity. Breast cancer survivors (BCS), struggle to initiate and maintain adequate physically active lifestyles. Barriers to physical activity BCS have identified including psychosocial, environmental, contextual, and musculoskeletal factors. The Behaviour Change Wheel was used to develop a novel behaviour change physical activity intervention, to address these barriers and increase BCS physical activity levels.

**Research question:** Is it feasible to deliver an individual physical activity behaviour change intervention for BCS within the NHS.

**Methodology:** A single arm none blinded intervention study was used to assess the primary aims of feasibility including; recruitment, retention, acceptability, practicality of delivery. Stage I and II BCS were recruited, within 18 months of diagnosis, from a secondary care NHS breast cancer unit, open access follow-up clinic.

**Results:** Nine of 36 potential participants were recruited; 50% were white, mean age 58. 25% recruitment rate, 97 % acceptability of all the intervention components. The intervention was practical to deliver and test. 8, would strongly recommend the intervention; felt that the intervention achieved its intended purpose of increasing their physical activity levels, with an acceptable level of burden, and that they would continue being physically active. From baseline to study end, all the participants had increased their physical activity levels to adequate levels.

**Conclusions:** It is feasible to deliver an individually tailored behaviour change intervention to breast cancer survivors in the NHS. With some modifications this study could progress to the piloting stage of design and development.



15:30 - 17:00

## Psychosocial interventions to increase physical activity in young people living with and beyond cancer

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Despite significant evidence for the psychological and physical health benefits of physical activity for children and young people living with and beyond cancer, many still do not meet the recommended levels of physical activity (PA). Little is currently known about which behaviour change techniques and intervention components successfully promote PA for children and young people in this population.

**Methods:** A systematic review was conducted to identify primary papers describing physical activity interventions for children and young people living with and beyond cancer. Using Bronfenbrenner's ecological theory as a framework, we explored the key intervention components across domains known to predict PA for young cancer survivors (Gilliam et al., 2011).

**Results:** Intervention components in the 14 review studies included: 1) behavioural (including goals and planning, instruction on how to perform the behaviour, self-monitoring, credible source, information about the consequences, behavioural rehearsal, habit formation, feedback on behaviour, verbal persuasion about capability, graded tasks, biofeedback) , 2) cognitive-emotional (targeting attitude, perceived behavioural control, intentions, resilience and achievement) 3) socio-cultural (family and peer support for PA), 4) environmental (providing access to resources, environmental restructuring, safety), 5) demographic, (ages 4-19) and 6) medical (provision of tailored exercise depending on age and cancer stage).

**Conclusions:** Promising interventions for improving physical activity participation and adherence during and beyond cancer treatment for young people integrate psychosocial (behavioural, cognitive-emotional, social), environmental and medical intervention components. Our conceptual model can be used to inform the development of empirically-supported clinical interventions, as well as guiding future research objectives and priorities.

15:30 - 17:00

## To reveal or conceal? Construction of a decision aid for employees with a chronic condition

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Most employees with a chronic disease are at some point confronted with the decision of whether, when and how to communicate their condition at work. As (non-)disclosure can lead to a variety of consequences that can either foster or counteract health and workability, the considerations might become overwhelming. Thus, the aim of our project is the construction of a decision aid that facilitates an informed decision. The objective of the first project phase is to determine its format, structure and contents.

Methods: An analysis of theoretical frameworks and existing research was combined with data collection via expert surveys (e.g. company doctors, self-help organisations, employers) and a quantitative online survey (N = 274 employees with chronic diseases).

Findings: Existing research and our own data reveal the complexity and individuality of the disclosure decision. To offer individual and low threshold support, an interactive online tool appears to be the appropriate format. In line with motivational theories, the decision aid will have a tripartite structure addressing anticipated positive and negative consequences, the likelihood in which these might occur and ways to cope with them. The decision aid will focus on individual and organisational factors (e.g. organisational climate, stigma) that are – according to theory, existing research and our own data – connected to decision outcomes.

Discussion: The planned decision aid aims at supporting individually good decisions that might in turn foster desirable health and work outcomes. Besides its practical relevance, it allows for new empirical insights, as research on this topic is scarce.

15:30 - 17:00

## An intervention to support treatment management for the chronic disease of HIV: The SUPA Intervention.

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<sup>4</sup>Psychological Medicine, Kings College London, United Kingdom

**Background:** Effectiveness of antiretroviral therapy (ART) depends on prompt uptake of treatment and a high level of long-term adherence, yet these behaviours are suboptimal. Previous interventions have significantly improved adherence but effect sizes are small.

The aim of this article was to describe the development of an intervention to support uptake and adherence to treatment in HIV positive patients (SUPA intervention).

**Methodology:** The intervention was devised in line with Medical Research Council guidance for development of complex interventions and informed by the Perceptions and Practicalities Approach to nonadherence, Necessity Concerns Framework, empirical evidence, preparatory research with target populations and user testing. The Template for Intervention Description and Replication checklist guided intervention development. Intervention participants were ART naïve HIV patients, who were clinically recommended to start ART attending an NHS clinic, who completed the Beliefs about Medicines Questionnaire, indicating high concerns and low necessity for ART adherence.

**Findings:** Intervention materials (patient and nurse manuals and digital animations) were developed by a multidisciplinary panel of experts in adherence, behaviour change, cognitive behavioural therapy, HIV medicine and HIV advocacy and user tested in focus groups with people living with HIV. The effectiveness of the SUPA intervention for increasing uptake and adherence to ART in people at risk for low engagement with ART is currently being evaluated in a randomised controlled trial in 10 HIV clinics across 7 NHS Trusts.

**Discussion:** We conclude that it is possible to report transparently on the development of a theory-based intervention to increase uptake and adherence to ART.

15:30 - 17:00

## Implementation and evaluation of a digital coaching ecosystem in primary care to support chronic patients

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<sup>2</sup>Meetpunt Kwaliteit, Dutch Institute for Rational Use of Medicine, Netherlands

**Background:** There is mounting evidence that a healthy lifestyle is associated with better disease control, higher quality of life and lower costs of healthcare. Consequently, there is increased attention for promoting a healthy lifestyle for patients with a chronic condition (e.g. diabetes or cardiovascular conditions) in primary care. However, providing adequate coaching support to initiate and maintain healthy lifestyle changes is a major challenge. To address this challenge, we developed a digital coaching eco-system entailing a smart wearable, a patient interface (mobile app) and a caregiver interface in the form of a web-based coaching dashboard. The challenges and learnings from the implementation and use of the ecosystem in the workflow of care professionals will be the focus of the presentation.

**Methods:** Qualitative research methods were used to understand the experiences of patients and health care professionals (general practitioners and nurse practitioners) with the coaching ecosystem.

**Findings:** The qualitative findings led to an understanding of the experiences and the identification of the main challenges for implementing and using coaching technologies in primary care to support the care for chronic patients. These were translated into specific recommendations for implementing digital coaching ecosystems in clinical practice.

**Discussion:** To empower care professionals in primary care to provide adequate coaching support for their patients, it is essential to carefully address the challenges with respect to implementation and use in daily clinical practice. The findings and recommendations contribute to the effective implementation of healthy lifestyle coaching technologies in clinical practice.

# Stress in occupational & lifestyle contexts

15:30 - 17:00

Stephen Gallagher

15:30 - 17:00

## Psychological factors, somatic concerns and secondary traumatic stress in female domestic violence support specialists

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<sup>1</sup>National University of Ireland Galway, Ireland

**Objectives:** To identify the workplace and psychological factors which predict the development of somatic concerns (SCs) and secondary traumatic stress (STS) in female domestic violence support specialists (DVSS). To evaluate whether the psychological profile of female DVSS who report experiencing 'trauma similar to their clients' differs from those who do not report prior trauma. To assess if compassion satisfaction (CS) and engagement in self-care plans protect against the development of SCs and STS in female DVSS.

**Design:** A within-subjects cross-sectional design was employed. An online survey included demographic questions and questionnaires to evaluate the predictors of SCs and STS.

**Methods:** As data collection is until May, participants are being recruited from national DVSS services and will use a sample of at least 43 based on G\*Power.

**Results:** Hypothesized that higher scores on the psychological and organizational factors evaluated will predict higher SCs and STS and that higher scores on CS and self-care engagement will predict lower SCs and STS. Hypothesized that those who identified prior personal trauma will rate higher on the evaluated factors, SCs and STS.

**Conclusions:** Psychoneuroimmunology (PNI) suggests that exposure to trauma "primes" the inflammatory response system so that it reacts more rapidly to subsequent life stressors. Afari and colleague's (2014) review found that individuals who reported trauma exposure were 2.7 times more likely to have a functional somatic syndrome. This study will highlight the effects of this work on a professional's physical and mental health at a national level and help to inform future organizational self-care practices.

15:30 - 17:00

## Factors contributing to occupational stress among remand prison staff: findings from qualitative research

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<sup>2</sup>University of East London, United Kingdom

**Background:** There are studies showing that prison officers experience higher than average level of work-related stress (Johnson et al., 2005; Finney et al., 2013). They face challenging work conditions and responsibilities, additional stress caused by inmates. Little is known about stressors of remand prison staff who deal with individuals prior to court. The aim of this study was to identify particular stressors that the remand prison staff face on a daily basis.

**Methods:** 6 focus groups were held with employees of one remand prison in Lithuania. Each focus group consisted of 8 to 10 individuals and each session lasted from 1 to 1,5 hours. The information was analysed using Content analysis.

**Findings:** The results showed that remand prison staff face various stressors: (1) various demands and effort requirements, i.e. heavy workload, night shifts, bureaucracy, high responsibility for behaviour of prisoners, feeling the need for the permanent standby, threat of inmate violence, fear/risk of infectious diseases, high emotional strain, manipulations and provocations from prisoners, unclear demands from authorities, etc.; (2) lack of resources and control, i.e. understaffing, lack of time for duties, having fewer rights than prisoners, etc. (3) lack of rewards, such as promotion opportunities, appreciation of their effort, trust from colleagues, appropriate salary; (4) restrictions at work, i.e. cannot bring their cell phones to work, feeling like being locked from the outside world.

**Discussion:** Analysis of frequency and severity of these stressors as well as cultural comparison would be of value in further studies.

15:30 - 17:00

## Effects of personality traits on the resilience of Japanese nurses

J. Seino<sup>1</sup>, M. Inoue<sup>2</sup>, R. Takahashi<sup>3</sup>, R. Ishikawa<sup>4</sup>

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<sup>3</sup>Iwate Medical University, Japan

<sup>4</sup>J. F. Oberlin University, Japan

**Background:** Nurses are required to deal with unexpected incidents appropriately, and as a result, they are often exposed to strong stressors. Therefore, the ability to overcome stressors, including resilience, is important for nurses to continue working. The difference in resilience in nurses based on years of experience and the work department were investigated.

**Methods:** Nurses were inquired about resilience, years of experience, and affiliated departments. A one-way analysis of variance was conducted with years of experience and departments as independent variables and resilience as the dependent variable. Multiple comparisons using the Tukey's method was conducted to analyze significant differences. IBM SPSS Statistics22 was used for the analysis. The significance level was set at 5%.

**Results:** Significant differences were shown in "abilities to support work" based on years of experience. The results of multiple comparisons indicated that new nurses with less than one-year experience had the highest score. Significant differences were also shown in "abilities to take actions" and "abilities to communicate" based on the department. The former was higher in the internal medicine and mixed surgery department than in the internal medicine department. The latter was higher in the ICU, CCU, and NICU than in the internal medicine department.

**Discussion:** New nurses are provided comprehensive education and support, which might lead to the high work supporting ability scores. Patients in ICU, CCU, and NICU have severe conditions, and they are often readmitted, which might demand high communication abilities of nurses.



15:30 - 17:00

## Impact of psychological stressors on vulnerability among Japanese university athletes

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Everyone experiences sensitivity. It is known as vulnerability in the field of psychology. Vulnerability is defined as “a susceptibility to damage to self, a state that may be fragile or hurt.” In previous study on vulnerability, female athletes had higher scores of vulnerability than male athletes, and it was strongly related to depression. However, the relationship between the subscale of vulnerability and the subscale of perception of stressor has not been clarified. Therefore, this study examined how stressors impact vulnerability in Japanese university athlete using covariance structure analysis.

The participants were 821 Japanese university athletes (559 male, 262 female, average age = 19.9 years, SD = 1.24). The questionnaires composed Demographics data (gender, sports), the Daily and Competitive Stressor Scale, and the Athletic Vulnerability Scale. For the analysis, we calculated the descriptive statistics and correlation coefficients of each scale. Next, we examined the influence of the stressor on the vulnerability subscale using covariance structure analysis.

Results showed that stressor subscales were positively related to vulnerability subscales ( $r = .20-.43$ ,  $p < .01$ ). Covariance structure analysis indicated that the influence of vulnerability from stressor differs between male and female. These results suggest that the differences must be considered when predicting university athletes' mental health. Therefore, in future research, we assume that it is necessary to examine the promotion and suppression factors of vulnerability with consideration of individual differences in terms of health psychology.

# Individual differences in health cognitions

15:30 - 17:00

Olivier Luminet

15:30 - 17:00

## Alexithymia and vulnerability to somatic and mental disorders: The role of cognitive and emotional processes

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<sup>2</sup>Belgian Fund for Scientific Research, Belgium

Alexithymia is a multifaceted personality trait that involves difficulties in identifying and describing feelings to others, a poor fantasy life and an externally oriented cognitive style. It has been investigated for more than 40 years as a potential risk factor for somatic and mental disorders. The primary evidences were controversial due to deficient assessment, correlational designs and poor attention to underlying mechanisms. In the recent years, however, the interest for the construct has increased in various domains of psychology (health, social, cognitive, clinical) and medicine (psychiatry, gastroenterology, cardiology, immunology, genetics). There is a need to summarize the existing findings and to provide an agenda for improving research on the impact of personality traits – and particularly alexithymia -- on mental and physical outcomes.

We advocate that a more careful attention to the types of cognitive and emotional processes involved illuminate the pathways and conditions under which higher levels of alexithymia can increase later somatic and psychological vulnerability. We consider specific circumstances (short vs. long exposure to situations, easy vs. complex tasks, pleasant vs. unpleasant situations) and sub-groups (clinical vs. healthy participants, men vs. women, young vs. elderly) for which higher levels of alexithymia are not related to deficits or are even related to efficient cognitive and emotional processing.

We conclude by recommendations for future studies including multi-processes (from early implicit to later explicit processing; considering abilities to detect, identify, recognize, label and regulate emotions), multi-tasks (considering concomitant markers of functional responses such as appropriate reactivity, fast recovery, habituation, and coupling among emotional or cognitive responses), and multi-assessment (self and informant-report, structured interviews and/or performance measures) approaches to improve future research on the impact of personality risk factors for somatic and mental disorders.

15:30 - 17:00

## Humour, laughter, and health: A social-cognitive approach

D. Korotkov<sup>1</sup>, J. Heim<sup>1</sup>

<sup>1</sup>St. Thomas University, Canada

Although researchers have linked trait humour to health, it has come at the cost of ignoring other perspectives such as social-cognitive theory. To help remedy this, two questions guided this research: (1) to what extent is humour and laughter coping efficacy and related social-cognitive constructs (self-regulation, outcome expectations, modelling) linked to trait humour, personality, stress, and well-being; and (2) is humour and laughter efficacy a singular construct?

Three samples (N's = 311, 187, and 39) were administered several social-cognitive humour/laughter measures as well as various trait humour, personality, stress, and well-being questionnaires; sample three participants filled out separate humour and laughter efficacy scales.

Pearson correlations were calculated for each sample and an exploratory principle components analysis (PCA) was computed for sample three.

Across samples, the social-cognitive variables were strongly correlated with trait humour (e.g.,  $r_{\text{SelfRegulationHumour}} = 0.54$ ,  $p < 001$ ), and less so with personality (e.g.,  $r_{\text{ExtraversionAndSelfRegulationHumour}} = 0.33$ ,  $p < .001$ ), stress (e.g.,  $r_{\text{HumourLaughterCopingEfficacy}} = -0.23$ ,  $p < .001$ ), and general health (e.g.,  $r_{\text{HumourFamilyObservationalLearning}} = -0.17$ ,  $p < .01$ ). The PCA (sample three) yielded a two-component solution, a humour/laughter component ( $\lambda_{\text{Humour}} = 0.92$ ,  $\lambda_{\text{Laughter}} = 0.88$ ) and a personality component.

The results suggest that developing the confidence to cope through humour and laughter, regulating one's own humour and laughter, observing humour in others, and having positive outcome expectations, may enhance one's own well-being. The results also found the efficacy measures to be valid, reliable, and that tentatively, humour and laughter can be studied as a singular construct.

15:30 - 17:00

## Investigating the role of positive psychology approaches for understanding body dissatisfaction in women

S.B. Rosales Cadena<sup>1</sup>, G. Waller<sup>1</sup>, F. Sirois<sup>1</sup>

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**Background:** Body dissatisfaction is the result of a person's negative perception, thoughts and feelings regarding one's body. Women who experience body dissatisfaction are less resilient to eating disorders. Self-objectification, focusing on the body as an object rather than its functionality, has been pointed out as one of the maintaining factors of body dissatisfaction. However, gratitude and self-compassion may be beneficial to lower levels of body dissatisfaction. This research explored to what extent gratitude and self-compassion relate to body dissatisfaction, and further test the potential explanatory role of self-objectification.

**Methods:** In this cross-sectional study, a total of 340 women aged between 18 to 66 years completed measures of self-compassion, gratitude, self-objectification, and body dissatisfaction. A screening question was used to exclude women with a history of eating disorders. Correlational analysis and multiple regression were used to examine data.

**Findings:** Findings indicated that there is a negative significant correlation between self-compassion ( $b = -.612, p < .001$ ) and body dissatisfaction. When both self-compassion and gratitude were included as predictors, self-compassion accounted for unique variance in body dissatisfaction whereas gratitude did not. Self-objectification was not correlated with any of the variables tested.

**Discussion:** These findings highlight the importance of enhancing self-compassion for understanding body dissatisfaction and how this may have the potential to be used in the design and development of interventions to reduce levels of body dissatisfaction in women and build resilience.

15:30 - 17:00

## Exploring Social Network Visualisation: Individual Differences, Stress and Health in Adults with Autism and Controls

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<sup>2</sup>University of Bath, United Kingdom

<sup>3</sup>Winchester University, United Kingdom

**Background:** To examine whether use of a visual mapping tool on which to represent quantity and closeness of social support would reveal differences in people with autism spectrum disorder (ASD) compared to controls. A range of stress and individual difference variables were assessed in relation to patterns of support and health status.

**Methods:** Thirty-one adults with a diagnosis of ASD and 132 controls (M age = 30.1 and 31.9 years respectively) completed an on-line visual social network map consisting of a series of concentric circles in which they identified friends and family proximal to themselves. A series of self-report measures assessed general health, perceived stress, sociability, autistic-like traits and degree to which participants could access visual imagery. Data were assessed using analysis of variance to compare between ASD and control groups and patterns of social support.

**Findings:** Descriptive analysis identified patterns of visual support to differ between those with ASD and controls. Interestingly, no significant differences were found between groups for quantity or closeness of social contacts. Participants with ASD reported significantly poorer overall health ( $p=.005$ ), higher perceived stress, lower sociability and poorer visual imagery ( $p$ 's all  $<.001$ ). A more complete visual pattern of social support indicated significantly lower scores on perceived stress ( $p=.038$ ) and higher levels of sociability ( $p=.032$ ) in ASD and controls.

**Discussion:** Findings indicate the importance of social support visualisation, as distinct from quantity and closeness, in relation to health and suggest a potentially untapped individual difference for understanding and improving social relationships and wellbeing.

15:30 - 17:00

## The role of social support and failure mind-sets in the procrastination and stress appraisals relationship

S. Yang<sup>1</sup>, F. Sirois<sup>1</sup>, P. Totterdell<sup>1</sup>

<sup>1</sup>University of Sheffield, United Kingdom

**Background:** Research indicates that procrastination takes a toll on psychological health, specifically, is linked to higher stress. Why chronic procrastinators experience greater stress is not fully understood. One possible reason is that procrastinators are prone to appraise their goals as more threatening rather than challenging, which coping theory suggests would lead to higher perceived stress. Low perceived social support and having a failure mind-set may contribute to threatening appraisals. This study investigated whether procrastinators appraise work-related or academic projects that they are struggling with as a threat versus a challenge, and whether social support and failure mind-sets explain their appraisals.

**Methods:** A sample of 203 adults completed an online survey including measures of procrastination, social support, and failure mind-sets. Goal-related stress appraisals were assessed using the Personal Projects Analysis rating matrix. Principal Components Analysis identified personal project dimensions associated with threat versus challenge appraisals.

**Findings:** Bivariate correlations revealed that trait procrastination was positively associated with threatening appraisals ( $r=.22, p<.01$ ), rather than challenging appraisals ( $r=-.03, p>.05$ ). Mediation analysis with bootstrapping found that the indirect effects of procrastination on threatening appraisals through social support and failure mind-sets, was significant for social support ( $b=.07, 95\% \text{ CI: } .02, .14$ ), but not for failure mind-sets ( $b=.02, 95\% \text{ CI: } -.02, .07$ ).

**Discussions.** The findings demonstrate that chronic procrastinators appraise their goals as more threatening, due in part to perceiving less social support. Findings highlight the potential role of stress appraisals for explaining why procrastinators experience greater stress, and suggest further research is needed.

15:30 - 17:00

## Predicting partner notification intentions for sexually transmitted infections: The role of outcome beliefs and self-efficacy.

N. Nearchou<sup>1</sup>

<sup>1</sup>University College Dublin, Ireland

**Background:** Partner notification (PN) has been asserted as one of the most effective intervention strategies in Sexually Transmitted Infection (STI) case management for controlling transmission. Yet there is limited research evidence in predicting PN intentions in European populations. This study aims to identify the role of beliefs related to PN outcomes and self-efficacy in predicting PN intentions.

**Methods:** Participants (n = 177; mean age = 28 years) were recruited from general public using a cross-sectional study design. Beliefs about the outcome of PN were assessed using the PN beliefs scale (Nuhawa et al., 2001;  $\alpha = .84$ ). Self-efficacy scale assessed the likelihood of PN in 12 different situations (Nuhawa et al., 2001;  $\alpha = .90$ ). Demographics and screening history for STIs were also measured. Hierarchical regression models were applied to predict participants' PN intentions.

**Findings:** A large percentage of participants reported that they have never been tested for STIs/HIV (47%). Outcome beliefs about controlling STI spread and influencing the relationship predicted PN intentions for STIs other than HIV ( $R^2 = .11$ ,  $F = 6.98$ ,  $p = .001$ ). Self-efficacy predicted PN intentions above and beyond beliefs significantly contributing to the model ( $R^2 = .15$ ,  $F = 6.47$ ,  $p < .001$ ) and explaining additional variance ( $F = 4.99$ ,  $R^2$  change = .036,  $p = .02$ ). These predictions were not evident for PN intentions for HIV.

**Discussion:** These findings suggest that PN intentions are influenced by beliefs related to the outcome of PN and by individual's perceived self-efficacy to notify their sexual partner.



15:30 - 17:00

## What drives severe haemophilia patients' decisions to change treatment? A qualitative study.

A. O'Sullivan<sup>1</sup>, S. Barnes<sup>1</sup>, D.S. NiMhurchadha<sup>1</sup>, C. Moloney<sup>1</sup>, L. Ashworth<sup>1</sup>, D.J. Reston<sup>2</sup>

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<sup>2</sup>Atlantis Healthcare & King's College London, United Kingdom

**Background:** Severe haemophilia A is an incurable, genetic disorder more commonly found in men. Patients experience frequent internal bleeding, causing pain and stiffness. Typical treatment involves prophylactic, twice-weekly infusions, which are invasive, inconvenient, and costly. Newer extended-half-life (EHL) treatments require less frequent infusions, yet patients are reluctant to switch. This research aimed to understand factors influencing treatment decisions, and the role of:

- Medication beliefs
- Treatment characteristics
- The doctor-patient relationship

**Methods:** Semi-structured telephone interviews were conducted with 11, UK-based men with severe haemophilia A, aged 27-39. Treatments included prophylaxis (n=9), EHL (n=1) and 'other' (n=1). Interviews were audio recorded and transcribed, and data analysed using thematic analysis.

**Findings:** Four themes emerged:

1. **Treatment satisfaction:** Quality of life depends on effective treatment – treatment change risks disrupting this. Taking effective, safe treatment, long-term, creates feelings of loyalty and gratitude.
2. **Low interest in new treatments:** When treatment is safe and effective, patients prefer routine. Something must go wrong to necessitate a treatment change (“If it's not broke, why fix it?”).
3. **Risk outweighing reward:** EHL benefits (fewer infusions) aren't seen to offset perceived risks (inhibitor development, lower efficacy, unsafe/impure).
4. **Passivity in doctor-patient relationship:** Patients trust doctors, and defer to them for decisions. They may wait for doctors to suggest and change treatments.

**Discussion:** Barriers to treatment switching include treatment familiarity, wanting to maintain normality, and patient passivity. Future work should aim to understand doctors' barriers to engaging patients in decisions, and develop effective tools to support doctor-patient collaboration.

15:30 - 17:00

## Profiling the health and dispositional related correlates of the Underdog

D. Korotkov<sup>1</sup>

<sup>1</sup>St. Thomas University, Canada

Despite being conceptually linked to resilience and health, little attention has been given to the underdog personality construct. Given the lack of study, this research set out to construct a psychological profile of the underdog and to assess its relationship to health and well-being. Three samples (N's = 231, 30 [test-retest], 170) were administered several personality, support, coping, stress, lifestyle, health, and underdog (2) measures. Correlation, regression, and components (PCA) analyses were run, save sample two. The primary underdog measure was predicted (all standardized betas) by hope (0.20), efficacy (0.25), meaning (0.24), courage (0.16), fighting spirit (0.42), conscientiousness (0.21), agreeableness (0.16), coping (0.22), healthy eating (0.18), sleep (0.16), support (0.23 to 0.25), self-controllability (0.20), positive mood (0.29), and health (0.15; p-values between .05 and .001). Furthermore, the PCAs found both underdog measures to load on the same components. Retest reliability for the primary underdog scale was 0.69 ( $p < .001$ ; average alpha = .81). These data suggest that the underdog is agreeable, conscientious, hopeful, views the world as controllable, has a fighting spirit, a sense of efficacy, a sense of meaning, copes both cognitively and socially, and eats and sleeps well. Further, the underdog appears psychologically and physically healthy. Methodologically useful for researchers, the primary underdog scale was found to be both valid and reliable. Overall, these data provide new information on a little understood yet important personality construct.

# Global health, culture, & well-being

15:30 - 17:00

Irina Todorova

15:30 - 17:00

## Autonomy, migration and well-being among university students

J. Benka<sup>1</sup>, O. Orosova<sup>1</sup>, M. Kulanová<sup>1</sup>, B. Hajduch<sup>1</sup>

<sup>1</sup>Pavol Jozef Šafárik University in Košice, Slovakia

**Background:** A change of one's living environment may result in a change with regard to the determinants of well-being and health. This is a relevant problem in Eastern Europe where the brain drain is a considerable problem.

**Aim:** This study will apply Self-determination theory (SDT) and focus on the construct of autonomy and investigate the associations between autonomy, well-being and migration among university students.

**Method:** Datasets from ongoing online surveys carried out as part of a larger project focusing on health-related behaviours of university students in Slovakia will be used. Well-being will be measured by SWLS and autonomy will be measured by several SDT based scales addressing support, functioning and self-regulation. Migration will be measured by several instruments designed for the purposes of the project. Regression analyses and SEM will be used to explore the relationship between well-being, autonomy measures and emigration intentions.

**Expected results:** It is hypothesized that autonomy will play the role of a third variable in explaining the relationship between subjective well-being and migration. Preliminary analyses show that autonomy support is positively associated with emigration intentions but negatively with subjective well-being.

**Current stage of work:** Finishing the preparation of the data and models for data analysis.

**Discussion:** The topic of this study has not been sufficiently explored in Eastern Europe where brain drain is an important problem. Preliminary results provide support for studying this issue from the SDT perspective.

15:30 - 17:00

## Social cohesion and identity protect adults exposed to an earthquake from PTSD

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It has been documented that exposure to disasters and traumatic events increases the risk of developing PTSD. Researchers have also shown, that many of those exposed will not develop symptoms, however, we know little about the factors that may explain these differences. Social cohesion has been found to protect from PTSD in other traumatic circumstances as well as social identity. However, these factors have been less studied among victims of disasters.

In this study we examined the role of social cohesion and identity on PTSD symptoms among adults exposed to an earthquake and tsunami, controlling for secondary stressors and social vulnerability. Participants were 501 adults (58.3%) directly exposed to the Pisagua earthquake on april 1, 2014, who were interviewed within 2 months of this event.

We found that social cohesion and identity were protective factors for PTSD symptoms, as well as being female and reporting higher social vulnerability. We also found that the effect of the secondary stressors associated with the disaster were eliminated once we introduced social cohesion and social identity into the model ( $F_{8,493}=5.47, p<0.01$ ). Our findings reveal the role of conditions that are probable in place before the disaster occurs and account of the social capital of those communities affected, that will probably influence on how the response unfolds after the event. These findings reveal the important role that social groups play and efforts to promote bottom up actions developed and implemented from communities to reduce risk of disasters in an environment with increasing number of disasters.

15:30 - 17:00

## Social position and health: Social norms guide impulsive behaviours towards money and food

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**Background:** Individuals with lower socioeconomic status more often suffer from impaired health and experience lower levels of wellbeing. Research indicates that perceived income level rather than absolute income level is more detrimental for individuals. We suggest that this occurs because relative income positions make people infer social norms that in turn guide their behaviour.

**Methods:** In a first study (N = 197), participants were asked to judge the level of impulsiveness of a poor vs. relatively poorer vs. relatively wealthier person. In two other studies (N = 498), participants were made to believe that their income level was relatively lower vs. higher than that of others. All participants then completed a money and food delay discounting task in order to measure their impulsiveness towards these types of rewards.

**Findings:** A Chi-square analysis showed that participants perceived a relatively poorer person as more impulsive than a relatively wealthier person ( $\chi^2(2)=25.9, p<.001$ ). Moreover, Generalized Linear Mixed models showed that false feedback about their relative income position, made participants behave according to beliefs associated to these positions: Poor individuals were more impulsive than rich individuals, but only when they perceived themselves as relatively poorer. When they perceived themselves as relatively wealthier, they behaved in the same manner as individuals with higher incomes.

**Discussion:** This series of studies suggests that beliefs associated with one's relative wealth position influences one's behavior. This suggests that changing social norms regarding class and relative income could be a promising way of tackling health problems associated with lower SES individuals.

15:30 - 17:00

## Exploring supported self-management practices of healthcare professionals for South Asian patients with asthma

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**Background:** Self-management support improves asthma outcomes and is widely recommended in guidelines, yet poorly implemented in routine practice, particularly for South Asian patients where making sense of culture may be necessary.

**Aim:** To explore healthcare professional's (HCPs) understanding and experiences of cultural realities that shape implementing supported self-management for South Asians.

**Method:** We conducted semi-structured interviews with nine HCPs from different ethnic backgrounds, recruited from primary/secondary/tertiary care services (GPs, consultants, emergency doctors, GP nurses and nurse specialists). Data were analysed thematically.

**Results:** HCPs described a chain of reasoning in tailoring supported self-management; 1) professional insights on patients: perceptions of realities about South Asian culture and patients as self-managers e.g. family importance, 2) cultural argumentation: systematic rationalisation of cultural realities e.g. making assumptions about family, 3) approaches to supported self-management: application of realities e.g. assuming family support is appropriate, 4) boundaries of professional practice: parameters in implementing realities e.g. using family for language interpretation. There was consensus that gaps in cultural knowledge need to be addressed.

**Conclusion:** Professionals tried to adapt supported self-management strategies for South Asians. Limitations in their knowledge and ability of services to incorporate cultural factors meant that HCPs overgeneralised cultural realities to understand patients better, without accounting for the shifting nature of culture in the UK (e.g. shifts across generations).

**Funding:** Asthma UK Centre for Applied Research.

15:30 - 17:00

## Raising sustainability awareness: a participatory action approach in health among higher education students in Switzerland

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Promoting sustainability is a major concern in contemporary Western societies. In the Swiss context, national policies aim at encouraging the further understanding of 'sustainable development' among future citizens through education. This communication aims to present a particular participatory action approach, implemented among higher education students.

It intended to address two related issues: 1) analyse perceptions on sustainability and its links with health, and 2) raise awareness about such links through a focus on daily life practices. This action-research was led within a period of two years (two cohorts). It involved Bachelor students enrolled in psychology at the University of Lausanne. As part of their practical training, the latter were led to conduct semi-structured interviews (n=203) with students from other faculties, supervised by early-career researchers in health psychology. This method was used as a tool to stimulate reflexivity among interviewees.

A lexicographic analysis was applied to explore main trends across the collected qualitative material, followed by a thematic analysis. Our results show that sustainability was represented by most students as an abstract concept, disconnected from their own social reality. However, when led to focus on contextualised daily practices, interviewees were able to identify different links between sustainability and health. Moreover, in the second cohort, students showed a more elaborate conceptualization of sustainability.

Educational perspectives based upon these findings will be discussed. Indeed, stimulating reflexivity by focussing on health related practices constitutes a powerful lever for raising awareness among students and favour change.



15:30 - 17:00

## Medicalization of ageing – cultural and global aspects based on selected movies and media messages

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The medicalization of old age is a process in which social or cultural phenomena gain new medical significance. An example of such processes is the perception of death as a disease and attempt of its pharmaceuticalization.

The highest degree of medicalization is one in which the social phenomenon returns to the already medicalized culture.

The study covers the phenomenon of medicalization of old age present in the culture in the form of movies as well as present in the society in the form of media messages.

As the latest research shows, this problem is becoming more urgent as the population is ageing. Moreover, the vague status of medicalization as a construct on the border of sociology and psychology results in the superiority of theoretical analyzes over empiricism.

In the study movies were analyzed in terms of the occurrence of medicalization construct with particular emphasis on the way of perceiving old age, its pharmaceuticalization, relationships, sexuality of the elderly people and their consumption.

In addition, an analysis of media messages has been applied taking into account the context in which older people are referred to.

Based on the results of the latest research movies can model behaviors and attitudes.

The main purpose of the study is to show that in movies and media messages some attitudes towards old age are strongly negative and present a medicalized image of the phenomenon.

15:30 - 17:00

## #MeToo: examining the differential impacts of sexual harassment and assault on women's health and wellbeing

L. Temple<sup>1</sup>

<sup>1</sup>University of New England, Australia

**Background:** The global #MeToo movement has sparked public debate. Controversially, many detractors have depicted sexual harassment (as opposed to sexual assault) as an inconvenience, but not harmful. To test this premise, this study examined health and wellbeing factors in women who had experienced sexual assault, sexual harassment, or neither.

**Method:** In total, 493 women (18-87 years;  $M=37.8$  years;  $SD=13.4$ ) completed an anonymous online questionnaire, which included items relating to sexual assault and harassment, and a range of health and wellbeing-related factors.

**Findings:** Overall, 23% of participants had been sexually assaulted, while 25% reported harassment (but not assault). Significant differences were indicated for health and wellbeing factors, such that sexual assault was associated with poorer outcomes than harassment, which in turn was associated with poorer outcomes than experiencing neither. These differences included: health satisfaction ( $F(2,484) = 9.83, p < .001$ ), number of cigarettes smoked/day ( $F(2,475) = 9.97, p < .001$ ), experiencing alcohol-related 'blackouts' ( $F(2,475) = 6.06, p = .003$ ), and anxiety symptomology ( $F(1,472) = 6.72, p = .001$ ). No significant group differences were indicated for age, education, income, or BMI. However, depression was found to partially mediate relationships between assault/harassment and health-related outcomes, including health satisfaction ( $z = -3.14; p = .001$ ) and experiencing 'blackouts' ( $z = 2.05; p = .04$ ).

**Discussion:** While not as severe as for women who have been sexually assaulted, the findings indicate that women who have been sexually harassed have poorer health and wellbeing than those who have not experienced either. Furthermore, treating depression symptomology may have a beneficial impact on the health of women who have experienced sexual assault or harassment.

15:30 - 17:00

## Modified HBM: NEUROTICISM, RISK-PERCEPTION, PERCEIVED BARRIERS OF EMIGRATION AND EMIGRATION INTENTIONS

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<sup>4</sup>Safarik University, Slovakia

**Background:** In the context of the modified Health Belief Model (HBM), the perceived barriers of emigration (PB) are related to emigration intentions (EI) and modified by other psychological factors. We consider neuroticism (NT) as a potential predictor of EI and risk-perception (RP) and PB as potential intervening variables.

**Objectives:** To examine the role of RP and PB in the relationship between NP and EI.

**Methods:** Data were collected online at 17 universities in Slovakia (n=489, 76.5% women, M=22.8, SD=3). EI were measured by the Intention to emigrate scale, NT by Big-Five subscale, RP by the DOSPERT while PB were measured by evaluations of the importance of six factors keeping them from leaving. Linear regressions and Sobel tests were applied to confirm the significance of the mediation and the created path diagram was tested by a SEM analysis.

**Findings:** NT was associated with RP ( $\beta=+.17$ ), PB ( $\beta=+.14$ ) and EI ( $\beta=-.10$ ). The relationship between NT and EI was fully mediated by RP ( $z=-3.01$ ;  $p\alpha<0.01$ ) and PB ( $z=-3.04$ ;  $p\alpha<0.01$ ) separately. The relationship between RP and EI was partially mediated by PB ( $z=-3.72$ ;  $p\alpha<0.001$ ). The path model of  $NT \rightarrow RP \rightarrow PB \rightarrow EI$  was identified given the good fit indices (GFI=.97; CFI=.97; RMSEA=.066; SRMR=.064).

**Conclusion:** NT is related to students' EI and this relationship is mediated by RP and PB. Higher NT is related to higher RP and this is related to higher PB which is related to lower EI among students. The factor of the modified HBM (PB) contributes to a better understanding of EI.

# Stress & Physiology

15:30 - 17:00

Paraic Ó Súilleabháin

15:30 - 17:00

## Dysfunctional Emotion Regulation Mediates the Relationship between Emotional Intelligence and Cardiovascular Recovery from Stress

A. Costello<sup>1</sup>, A. Creaven<sup>1</sup>, S. Howard<sup>1</sup>, S. Gallagher<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

Research demonstrates that a variety of adverse, long-term health outcomes, namely cardiovascular disease (CVD) can result from prolonged physiological activation. To date, the role of emotional intelligence and emotion regulation in attenuating or exacerbating the risk of developing CVD after stress exposure is sparse. The current study addresses this by examining the relationship between emotional intelligence (EI), dysfunctional emotion regulation (ER) and cardiovascular recovery from stress. A within-subjects experimental design was employed. Eighty-four participants completed the Trait Meta-Mood scale as a measure of trait EI and the Emotion Regulation Profile-Revised as a measure of ER while having their systolic (SBP), diastolic blood pressure (DBP) and heart rate (HR) measured from baseline, during a cognitive task and throughout a recovery period. Hierarchical regression analysis revealed that EI predicted HR recovery, whereby low levels of EI resulted in delayed cardiovascular recovery. The use of non-coping emotion regulation strategies (dysfunctional ER of negative emotions) predicted prolonged HR recovery, whereas dampening emotion regulation strategies (dysfunctional ER of positive emotions) did not significantly predict HR recovery. Importantly, mediation analysis revealed that non-coping strategies fully mediated the relationship between EI and HR recovery. This study concluded that people with low levels of EI use non-coping strategies more frequently, i.e., they demonstrate an inability to successfully regulate negative emotions resulting in prolonged HR recovery from stress. These findings highlight the need for developing interventions aimed at improving emotion regulation strategies as a means of health protection and promotion.

15:30 - 17:00

## Self-compassion and cardiovascular recovery from stress.

S. Dockray<sup>1</sup>, P. Lyne<sup>1</sup>, A. O'Callaghan<sup>2</sup>, K. Pyrz<sup>1</sup>, D. Waugh<sup>3</sup>

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<sup>2</sup>Sustainable Energy Authority Ireland, Ireland

<sup>3</sup>Union of Students in Ireland, Ireland

**Background:** Self-compassion, a self-attitude of treating oneself with non-judgemental understanding, may reduce the duration of response to stress. This effect may occur by reducing the degree of threat to the self, and reducing self-criticism. The aim of this study is to examine the association of self compassion and cardiovascular recovery from a stress challenge.

**Methods:** Participants (N=100, 52 females, mean age 24 years) completed measures of demographics, health status and behaviours and the Self-Compassion Scale (Neff, 2003) before attending a research session. During this session measures of blood pressure and heart rate were collected before, during and for 20 minutes after a standardised stress challenge. Change scores were calculated to represent heart rate and blood pressure reactivity and recovery. Hierarchical linear modelling was used to examine predictors of recovery scores.

**Findings:** Self compassion was associated with faster recovery of heart rate ( $\beta = .34$ ,  $t(91) = 2.53$ ,  $p < .001$ . and systolic blood pressure ( $\beta = .12$ ,  $t(91) = 1.78$ ,  $p < .001$ ), but not diastolic blood pressure, after controlling for age, sex, health status, health behaviours, perceptions of stress, and stress reactivity. Self-Kindness, a Self-Compassion subscale, was related to heart rate and systolic blood pressure recovery scores. There was no association of self-compassion and reactivity scores. There were no interactive effects of sex or age with self-compassion on heart rate, diastolic blood pressure or systolic blood pressure recovery scores.

**Discussion:** Self-compassion may promote faster cardiovascular recovery from stress challenges that incorporate a performance evaluation component.

15:30 - 17:00

## Cognitive effects of increased noradrenergic activity by yohimbine in patients with major depression

C.E. Deuter<sup>1</sup>, L.K. Kühl<sup>1</sup>, K. Wingenfeld<sup>1</sup>, C. Otte<sup>1</sup>

<sup>1</sup>Charité Universitätsmedizin Berlin, Germany

Stress has been shown to play a fundamental role in the development and maintenance of major depression. Importantly, maladaptive changes in the physiological stress regulation systems have been demonstrated. For instance, in the locus coeruleus-noradrenergic (LC-NA) system, an up-regulation of central alpha2-adrenergic receptors has been found. Chronic stress in early life, e.g. adverse childhood experiences (ACE) such as physical or sexual abuse, is one hypothesized mechanism. The LC-NA system influences not only the physiological stress response, but also affects cognitive function. Although cognitive deficits are core symptoms of a major depressive disorder (MDD), the relationship of the LC-NA system and cognitive processes has rarely been investigated so far in depressed patients. The aim of our study was to investigate whether noradrenergic stimulation affects cognitive flexibility in MDD patients. In addition, we aimed to further disentangle the potentially mediating role of adverse childhood experiences. In a double-blind placebo-controlled study, MDD patients with ACE, MDD patients without ACE, healthy participants with ACE and healthy control participants without ACE were tested with a task switching task. Participants were tested twice after treatment with either 10 mg yohimbine or a placebo. Task performance served as the independent variable. We found higher switch costs in MDD patients as compared to controls, while ACE did not affect task performance. The results of this study contribute to a better understanding of the role of the LC-NA system as a neurobiological mechanism of cognitive processes in patients with MDD.

15:30 - 17:00

## Type D personality, social interactions and perceived life events stress

A. O' Riordan<sup>1</sup>, S. Gallagher<sup>1</sup>, S. Howard<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Life events stress has recently been suggested to be one mechanism facilitating the relationship between Type D personality and adverse health. Social support and negative social interactions are well-established psychosocial factors influencing perceptions of stressful life events. As Type D individuals have been noted to report lower levels of social support and greater perceptions of negativity in social interactions, the current study examined if the relationship between Type D personality and life events stress is mediated by positive social support and negative social support.

**Methods:** The sample consisted of 97 undergraduate students who completed a cross-sectional survey assessing negative life events stress, Type D personality, positive social support, and perceptions of negative social interactions (hostility and rejection).

**Findings:** Type D personality was associated with a greater number and perception of stressful life events. Further, Type D personality was associated with greater perceptions of hostility and rejection from others, as well as lower levels of social support. Finally, the relationship between Type D personality and life events stress was significantly mediated by perceptions of hostile interactions, but not positive support.

**Discussion:** Type D individuals have a greater perception of hostile social interactions, which appear to engender a greater perception of stressful life events, indicating a potential mechanism putting Type Ds at increased risk of adverse health outcomes.



15:30 - 17:00

## Does Heart Rate variability a real proxy of self emotion regulation?

C. Fantini<sup>1</sup>, E.B. Batselle<sup>1</sup>

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**Introduction:** Heart Rate Variability (HRV) is mainly viewed as an emotion regulation biomarker following Porges or Thayer's theories. HRV reflect top down processes implying pre-frontal cortex, a central structure for emotion regulation and responsible of inhibitory control and executive functioning. Studies investigating HRV and self perceived emotion dysregulation are rares but show a modest or no relationship . However, both HRV and perceived dysregulation are associated with depression. We hypothesise that both self perceived dysregulation and HRV explain greater depression scores. Further, self representation about ones ability did not exactly reflect the autonomic marker of emotion regulation. so, we could not exclude that HRV, as an inhibitory control, may dampened high emotion dysregulation.

**Method:** 97 graduate student completed a depression and anxiety questionnaire (HADS), and a dysregulation of emotion strategy scale (DERS). A 5 min resting HRV was measure using a polar V800 and HRV (RMSSD) was extracted and artefact corrected with Kubios 3.

**Results:** Correlations show positive and significant relation between depression and dysregulation but a significant and negative one between depression, dysregulation and HRV. More interestingly, robust linear hierarchical regressions show that there was a significant interaction between perceived dysregulation and HRV on depression scores ( $R^2_{add} = 10\%$ ). At low level of HRV, dysregulation was associated with higher depression but exhibit no relation with depression at high HRV level.

**Conclusions:** this result suggest that HRV is not a proxy of self perceived emotion regulation but rather a potential compensation mechanism when dysregulation is important.

# Health Prevention and Interventions in Older Adults

15:30 - 17:00

Maria Pertl

15:30 - 17:00

## Understanding the Experience of Alzheimer's Disease Diagnosis Disclosure: The Patient-Carer Dyads' Lived Experience

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<sup>1</sup>University of Malta, Malta

<sup>2</sup>Gerontology Department, University of Malta, Malta

Alzheimer's disease (AD) is the most common cause of dementia accounting for 60 to 80 percent of all cases. In addition, while the global prevalence of AD and related dementias was about 50 million in 2015, due to an ageing population and the increase of several other environmental health effects such as obesity, smoking, diabetes and hypertension, this figure is expected to almost triple by 2050. The majority of individuals affected with AD are not diagnosed early in the disease process and even if diagnosed, most of them do not receive a formal diagnosis. Furthermore, several barriers prevent patient and carers from seeking help immediately, increasing the risk a late diagnosis. Thus the primary aim of this phenomenological study was to elucidate the experience of AD diagnosis disclosure from the patient-carer dyads' experiences. Three patient-carer dyads were recruited through purposive sampling and audio-recorded semi-structured interviews were carried out. Interpretative Phenomenological Analysis was used to explore this phenomenon. The findings from the patient-carer dyads shed light on their pre-diagnostic experience, their experience of the diagnosis disclosure, and the implications of living with AD. The findings also highlighted the different mechanisms employed by the dyads to cope with the diagnosis. This research highlighted various recommendations for clinical practice, policymakers, future research, and education in relation to the area of AD diagnosis disclosure.

15:30 - 17:00

## Aging and trauma survivors – The longitudinal impact of captivity and PTSD on cognitive performance

R. Aloni<sup>1</sup>, L. Crompton<sup>1</sup>, Y. Levin<sup>1</sup>, Z. Solomon<sup>1</sup>

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**Background:** War captivity is a pathogen for premature aging, including cognitive impairments. However, little is known about the long-term impact of war captivity and post-traumatic disorder (PTSD) on cognitive functioning. This study assessed the effect of captivity, PTSD trajectories and the accumulating differential effect in the prediction of cognitive performance.

**Methods:** This longitudinal research includes four assessments (1991, 2003, 2008, 2015) of Israeli former prisoners-of-war (ex-POWs; n=95) and comparable combatants (n=26) from the 1973 Yom Kippur War. PTSD was assessed according to the DSM-IV. Cognitive performance was assessed using the Montreal Cognitive Assessment (MOCA). We conducted a multivariate analysis of covariance and hierarchical regression analysis to test our hypotheses.

**Findings:** Ex-POWs reported higher levels of PTSD symptoms compared to controls. No difference was found between the groups regarding the MOCA total score. Ex-POWs with chronic PTSD were found to have more difficulty in overall cognitive functioning, compared to ex-POWs with delayed, recovery and resilient trajectories. Physical and psychological suffering in captivity and intrusion symptoms predicted cognitive performance ( $p < 0.001$ ,  $R^2 = 37.9\%$ ). These findings support the pathogenic effects of war captivity on cognitive abilities, more than four decades after the traumatic event.

**Discussion:** Our results showed captivity to be a unique and powerful traumatic experience, leading to PTSD and enduring neuropsychological implications. This highlights the importance of viewing ex-POWs at a high-risk for cognitive disorders, particularly those with chronic PTSD, especially as they age. The appropriate diagnosis and cognitive therapy are required to prevent and preserve the cognitive abilities of this population.

15:30 - 17:00

## Exercise participation and adherence in adults with Mild Cognitive Impairment (MCI): A mixed methods study.

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**Background:** Dementia is a debilitating, progressive neurological condition affecting 35.6 million people world-wide. Research shows that exercise can have a protective effect against cognitive decline and therefore has potential as a preventative measure. Mild Cognitive Impairment (MCI) is an intermediate stage between cognitive changes associated with normal aging and dementia and is a key stage for targeted preventative interventions. Adherence to exercise in adults has been found to be low, but it is unclear what factors are related to exercise uptake and adherence in an MCI population. This study aims to provide detailed qualitative data regarding the barriers and facilitators to exercise uptake and adherence in adults over 50 years suffering from Mild Cognitive Impairment.

**Methods:** Qualitative interviews using Grounded Theory methodology will identify barriers/facilitators to exercise and adherence. Analysis will include using grounded theory techniques such as thematic analysis, constant comparison and theoretical sampling. Findings will be integrated with the findings of quantitative analyses of the dependent variables of exercise participation and adherence and neuropsychological factors such as baseline fitness, frailty, level of cognitive impairment and self-efficacy.

**Current stage of work:** To date 20 semi-structured interviews have been conducted. As coding is in the initial stages, only preliminary themes are available for Discussion:

**Discussion:** This body of work will help to advance our knowledge of the possible barriers and facilitators to exercise and adherence in people with MCI, and is important for the development of feasible, effective exercise interventions aimed at slowing or preventing cognitive decline.

15:30 - 17:00

## Relationship between physical fitness and falls among community-dwelling elderly in Japan

K. Yamatsu<sup>1</sup>

<sup>1</sup>Saga University, Japan

**Background:** Falls among the elderly population are common, since ageing is a risk factor of falling. It is important to prevent fractures as a result of fall. Among the elderly, balance disorders and muscle weakness are associated with increased risk for falling, but the relationship of physical fitness with falls is unclear. The purpose of the study was to determine whether physical fitness was associated with falls in Japanese rural elderly.

**Methods:** Participants were 622 elderly (mean age: 73.4±7.2, mean body mass index [BMI]: 23.2±3.5) living rural area in Japan. All participants completed the questionnaires and two types of physical fitness tests (hand grip-strength and usual walking speeds). The physical fitness tests were reported to be valid by previous study (Shinkai et al., 2000). Independent measures were handgrip force and walking speed.

**Findings:** Of 622 subjects, 23.5% reported falling during the past year. Of those falling, 26.0% fell recurrently. Even after controlling for covariates (age, sex, BMI, healthy eating, sitting time and chronic conditions), falls were associated with hand grip (OR=0.95, 95% CI=0.91, 1.00) and with walking speed (OR=0.15, 95% CI=0.06, 0.38). Recurrent falls were associated with walking speed (OR=0.06, 95% CI=0.01, 0.33) only.

**Discussions:** Although both hand grip-strength and usual walking ability were associated with falls, usual walking ability may reduce risk for recurrent falls.

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15:30 - 17:00

## What motivates older adults to participate in a falls prevention program?

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**Background:** This ongoing study investigates older adults' motives to participate in the group-based falls prevention program "Be active, but safe" offered by the German health insurance company AOK Nordost. Based on socioemotional selectivity theory (SST) it is assumed that older adults' decide to join the program for emotional rather than health motives and that this motivational shift is associated with participants' age.

**Methods:** This longitudinal study has two measurement points in time (T1 and T2, 6 months apart). At T1 participants complete a self-report questionnaire including subjective group cohesion, loneliness and motives. At T2, retrospective data on training adherence will be collected and regressed on group cohesion, loneliness, motives and health-related variables. In addition, up to 20 participants will partake in semi-structured interviews.

**Expected results:** It is expected that emotional motives to participate in the program prevail. Perceived loneliness and group cohesion are assumed to have an association with training adherence.

**Current stage of work:** So far, 19 out of 31 institutions offering the training have participated, and n=80 older adults have completed T1 (51-91 years of age, 92% women). Semi-structured interviews will start in May 2018.

**Discussion:** Understanding older adults' core motives to participate in a group-based falls prevention programs can help to increase the reach of future programs.

15:30 - 17:00

## Co-designing a behaviour change intervention for older adults living with cancer: determining a theoretical basis.

L. Brown<sup>1</sup>, K. Campbell<sup>1</sup>, R. Kyle<sup>1</sup>

<sup>1</sup>Edinburgh Napier University, United Kingdom

**Background:** 1 in 8 people in the UK aged  $\geq 65$  are living with a cancer diagnosis. Protective health behaviours can reduce the effects of cancer in older adults. Due to a lack of participation interventions to promote these behaviours in this group are common. However, a definitive theoretical basis for such interventions is still to be determined. **AIM:** To determine a theoretical basis for a behaviour change intervention for older adults living with cancer.

**Methods:** 24 participants, 12 older adults with cancer and 12 individuals who support adults with cancer will take part in a co-design process, drawing on Experience Based Co-design (EBCD), alongside other co-design Methods: An Adaptive theory approach will be embedded in this process to ascertain the optimum theoretical basis for the intervention. Initially the Transtheoretical Model (TTM) will be presented as a potential theoretical basis, due to its dominance in previous literature. Discussion, interactive tasks and reflection will be used to adapt or exchange the initial theory.

**Expected results:** Data collected will provide evidence to determine the theoretical underpinnings for the intervention. Results are expected to highlight the social and interactive requirements of both the theory and proceeding intervention.

**Current stage of work:** This work is in the early stages of data collection.

**Discussion:** Using an adaptive theory approach in this manner is a novel way to produce evidence for theories that underpin behaviour change interventions. The study will influence future behaviour change interventions, as well as the manner in which theories and models are generated.



# Health professionals' roles in supporting health behaviours

15:30 - 17:00

Jo Hart

15:30 - 17:00

## Investigating midwives' beliefs about their Public Health practitioner role

J. McLellan<sup>1</sup>, R. O'Carroll<sup>2</sup>, H. Cheyne<sup>2</sup>, S. Dombrowski<sup>2</sup>, S. Currie<sup>2</sup>

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<sup>2</sup>University of Stirling, United Kingdom

**Background:** The role of midwives in delivering Public Health (PH) and behaviour change interventions to pregnant women has developed significantly. Yet little is known about midwives' beliefs regarding the multiple demands of this expanded role. This research aimed to investigate midwives beliefs about their PH role by identifying the perceived barriers and facilitators experienced in assuming this role.

**Methods:** Community midwives (N=11) took part in one-to-one semi-structured interviews underpinned by the Theoretical Domains Framework v1 (TDF). Interviews were transcribed verbatim and analysed using a direct content analysis approach in which utterances were coded into the most relevant TDF domain. Belief statements were generated for domains identified as important, and a list of barriers and facilitators based on midwives beliefs was generated.

**Findings:** "Social influences" was considered important domain as there was a perception that women were, at times, providing socially desirable PH information. It was also important as midwives believed their peers to be a useful source of support in their PH practice. "Memory, Attention and decision processes" was an important domain as midwives reported using their instinct in making decisions related to PH. Midwives also reported finding it harder to place attention on PH topics as pregnancy progressed.

**Discussion:** Barriers included overcoming socially desirable responses, and a perception that discussing PH topics becomes increasingly challenging as pregnancy progressed. Facilitators included peer support and instinct. Interventions designed to support midwives should address these perceived barriers and use the facilitators to enhance PH practice.

15:30 - 17:00

## Supporting health behaviours in young pregnant and postnatal women: an interview study with healthcare professionals

E. Olander<sup>1</sup>, G. Lucas<sup>1</sup>, D. Salmon<sup>1</sup>

<sup>1</sup>City University of London, United Kingdom

**Background:** Providing support regarding healthy eating and physical activity during and after pregnancy is important. Research to date has focused on support provided to the adult pregnant population, so the aim of this study was to focus on guidance provided to adolescent women as reported by healthcare professionals. To guide this investigation, we used the COM-B (capability, opportunity, motivation – behaviour) model, which has been used previously to explore healthcare professionals' experiences in supporting perinatal weight management.

**Methods:** Semi-structured interviews will be conducted with 15 currently practising health and social care professionals (including midwives, health visitors, Family Nurse Partnership) as well as those in the voluntary sector involved in the care of adolescents during pregnancy to 24 months postpartum. Interviews will be analysed using thematic analysis and mapped onto capability, opportunity and motivation.

**Findings:** Based on six interviews, findings suggest that participants have adequate knowledge regarding eating and physical activity, but face challenges in engaging young women and making advice meaningful (capability). Regarding opportunity, time to discuss the behaviours was identified as a barrier for some professionals. For motivation, participants reported to be in a good position to support healthy eating and physical activity, but that other issues such as housing or supporting mental health took priority.

**Discussion:** Preliminary findings suggest that the interviewed participants identify providing support regarding eating and activity as within their role but need help to tailor this to women amidst other priorities.

15:30 - 17:00

## Adults with asthma and pharmacist-led medication adherence support in general practice

M.A. Mes<sup>1</sup>, C. Katzer<sup>1</sup>, A. Chan<sup>1</sup>, V. Wileman<sup>1</sup>, S.J. Taylor<sup>2</sup>, R. Horne<sup>1</sup>

<sup>1</sup>University College London, United Kingdom

<sup>2</sup>Queen Mary University London, United Kingdom

Medication non-adherence limits the efficacy of asthma treatment. A new healthcare model (clinical pharmacist consultations in general practice) is being implemented to support medication use in people with asthma. The aim of this study was to explore the perspectives of adults with asthma on this healthcare model to identify its barriers and enablers.

Adults with asthma (n =12) on preventer inhaler treatment and living in the United Kingdom (UK) were recruited through Asthma UK, hospitals, and social media. Upon recruitment, participants were e-mailed a description of the clinical pharmacist healthcare model. Through semi-structured telephone interviews, participants discussed their general experiences with pharmacists, and gave feedback on the clinical pharmacist healthcare model. Data was analysed using thematic analysis.

Barriers of the healthcare model included perceptions of the pharmacist's role and concerns about commercialism. Participants often did not differentiate between clinical and community pharmacists. They viewed pharmacists as dispensers and were sceptical of the "commercial interests" of large pharmacy chains. However, those with multiple medications (polypharmacy) and/or previous positive experiences with pharmacists were more supportive. They believed pharmacist consultations would "free-up" general practitioners, but were hesitant about expanding them to include other conditions in case of decreased access for people with asthma.

Perceptions of pharmacists, largely influenced by community pharmacy, transfer onto pharmacists in general practice. Changing the healthcare setting (community pharmacy to general practice) did not address the concerns participants had about pharmacist-led care. To ensure the effective implementation of this healthcare model, these perceptions need to be addressed.

15:30 - 17:00

## Midwives views of providing specialist care for pregnant women with a BMI $\geq$ 40kg/m<sup>2</sup>.

S. Currie<sup>1</sup>, K. King<sup>2</sup>

<sup>1</sup>University of Stirling, United Kingdom

<sup>2</sup>NHS Dumfries and Galloway, United Kingdom

**Background:** Obesity during pregnancy is associated with risks such as birth complications, gestational diabetes and high blood pressure. NHS Dumfries and Galloway adapted a programme entitled "OptiMUM" which focused on reducing excessive gestational weight gain by providing specialised care for pregnant women who have a BMI $\geq$ 40kg/m<sup>2</sup>. The aims of this research were to 1) evaluate health professionals experiences of the OptiMUM programme, and 2) understand the barriers maternal health professionals faced when delivering OptiMUM.

**Methods:** Focus groups and interviews were conducted with ten midwives. Verbatim transcripts were analysed using thematic analysis.

**Findings:** Four main themes emerged; preconception care and advice, barriers to uptake, training in health behaviour change and delivery of OptiMUM. Experiences of delivering the programme were mostly positive however participants noted that their first contact with women was too late for behaviour change and women needed support before pregnancy. Participants felt that all maternal health professionals should have comprehensive training health behavior change rather than this role being specialist. Barriers to efficient delivery of the programme linked to time, where participants felt that they did not have the time to adequately deliver the programme due to competing demands of their role.

**Discussion:** Findings indicate that participants support the delivery of a specialist antenatal service however there are barriers to delivering this effectively. To support health professionals and to enhance long-term behaviour change, services like OptiMUM should be staged and delivered to women at all phases of their reproductive lives hence sharing the burden maternal health professionals currently face

15:30 - 17:00

## Collaborating with health professionals to support women with a BMI >30kg/m<sup>2</sup> to breastfeed

S. Lyons<sup>1</sup>, S. Currie<sup>2</sup>, S. Peters<sup>1</sup>, T. Lavender<sup>1</sup>, D. Smith<sup>3</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>University of Stirling, United Kingdom

<sup>3</sup>Leeds Trinity University, United Kingdom

**Background:** The World Health Organisation (WHO) recommend that all infants are exclusively breastfed for six months, but few women with a Body Mass Index (BMI)  $\geq 30\text{kg/m}^2$  adhere to this recommendation (Scott-Pillai et al., 2013). A recent systematic review (Lyons et al., in press) suggested several targets for interventions to increase breastfeeding rates for women with a BMI  $\geq 30\text{kg/m}^2$ . As previous interventions have failed to do this (Bandure et al., 2015), collaboration between researchers, women and health professionals during intervention design is crucial for success.

**Aim:** To collaborate with health professionals and women to reach consensus on a psychological intervention content and design, to improve breastfeeding rates in women with a BMI  $\geq 30\text{kg/m}^2$ .

**Methods:** Following best evidence synthesis methodology (Bradshaw et al., 2012), a stakeholder meeting was conducted with seven attendees (infant feeding coordinators, midwives, public health specialists and breastfeeding women). The meeting involved discussion of research findings and development activities to decide on key aspects of the intervention content and mode of delivery.

**Findings:** Consensus was reached for the inclusion of eleven of eighteen psychological factors in the intervention. Attendees also agreed on design with the intervention to be delivered over four sessions spanning pregnancy and postpartum.

**Conclusions:** The importance of collaboration when designing breastfeeding interventions is evident, and should result in the design of a successful intervention which is acceptable to both health professionals and women with a BMI  $\geq 30\text{kg/m}^2$ .

15:30 - 17:00

## Health Care Professionals' Support For Adherence to Multiple Medications

J. Roseman<sup>1</sup>, Y. Song<sup>2</sup>, S. Chen<sup>2</sup>, J. Allegrante<sup>2</sup>, R. Jakubowski<sup>3</sup>, E. Scigliano<sup>4</sup>, W. Redd<sup>4</sup>, G. Stadler<sup>1</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

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<sup>3</sup>Mount Sinai Hospital, United States

<sup>4</sup>Icahn School of Medicine at Mount Sinai, United States

**Background:** Health care professionals play an important role for adherence to medication, but so far it is unclear which concrete actions patients find helpful, particularly when managing multiple medication regimens. The aim of this study is to describe health providers' concrete actions to support adherence to a complex medication regimen in individuals after bone marrow transplant.

**Methods:** We conducted a qualitative study, interviewing 25 individuals after bone marrow transplant. Individuals reported on their experiences with health care providers prescribing a multiple medication regimen. Data were analyzed using content analysis. Coding categories were developed based on classical social support theory distinguishing between informational, emotional, and practical support.

**Findings:** Individuals after transplant reported high trust in the health care providers and their decisions as well as receiving extensive support from them. Participants relied on health care providers nearly exclusively for informational support, while some also reported receiving extensive emotional support, particularly from nurses. Participants reported several practices that facilitated adherence. These include: a discharge meeting to review each medication and potential side effects including a printed overview; jointly organizing the medications in a pillbox; and including lay caretakers in the discharge meeting.

**Discussion:** While many of the aforementioned actions recommended by individuals were implemented, there is still room for improvement to deliver them to all patients. The results of this study suggest that there is a need to develop interventions to support patients and their caretakers in multiple medication use, and that health care providers will play an important role in it.

15:30 - 17:00

## Personal risk readiness and the framing effect in medical doctors

Y. Krasavtseva<sup>1</sup>, N. Bogacheva<sup>2</sup>, T. Kornilova<sup>1</sup>

<sup>1</sup>Lomonosov Moscow State University, Russia

<sup>2</sup>Sechenov First Moscow State Medical University, Russia

**Background:** Decision-making for professionals in medical care includes a risk factor. Cognitive regulation of decisions may involve the framing effect, as was demonstrated by A. Tversky. Personal regulation of decision making for medical doctors presupposes their attitude towards uncertainty and risk (risk intelligence).

**Research question:** To what extent is the framing effect related to personality features of medical doctors.

**Methods:** The study was designed to compare two groups (total N=118): medical students (N=78, of them 73% were women) and medical doctors of various specialties (N=40, of them 55% were women). **Measures:** (1) Asian disease problem. (2) Direct self-assessment of risk readiness. (3) Personal Risk Factors questionnaire, assessing risk readiness and rationality. (4) Implicit Risk Theories questionnaire, assessing risk perception.

**Findings:** The framing effect was found in 36% of medical doctors and in 42% of medical students. The doctors who were not susceptible to the framing effect assessed themselves as risk-taking and perceived risk to be a conscious choice ( $r=0.6$ ,  $p < 0.01$ ). Medical students showed a higher risk readiness and perceived risk as a choice and pleasure ( $p < 0.05$ ).

**Discussion:** Self-assessed risk readiness, in both medical doctors and students, is related to implicit theories of conscious risk. Implicit theories change during the education process. Medical doctors are able to control their risk readiness. The framing effects indicate that although medical care is given on the foundation of academic knowledge, cognitive processes interfere in decision-making.

The study was supported by an RFFI grant №17-06-00130.



# Change in health care services

15:30 - 17:00

Rachael Powell

15:30 - 17:00

## “Around the edges”: characterising a multilevel implementation intervention using behaviour change techniques

S. McHugh<sup>1</sup>, C. Sinnott<sup>2</sup>, E. Racine<sup>1</sup>, S. Timmons<sup>1</sup>, M. Byrne<sup>3</sup>, P. Kearney<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

<sup>2</sup>University of Cambridge, United Kingdom

<sup>3</sup>NUI Galway, Ireland

**Background:** We examined the applicability of the Behaviour Change Technique (BCT) Taxonomy to characterise the content of an existing multilevel implementation intervention used to support the introduction of fall risk assessment clinics.

**Methods:** Interviews were conducted with a purposive sample of stakeholders involved in the design and delivery of the intervention (n=6). Observations of training sessions with multidisciplinary teams and information sessions referrers were conducted (n=4 sessions). Documents including plans, referral and promotional material were collated (n=22). Data were coded to identify BCTs and intervention functions.

**Results:** Overall, 23 discrete BCTs were identified. At a system level, the most common BCT was restructuring the social environment, however some activities did not have an immediate or clear behavioural target and did not align with BCT definitions. At the professional level, where the largest number and variety of techniques were identifiable, the most common techniques were instruction on how to perform the (assessment) behaviour and demonstration of behaviour, serving a training function. Very few BCTs were used to target patients. There was synergy between BCTs across levels of the intervention, reinforcing a particular function or combining to serve a broader function.

**Conclusion:** While BCTs and functions were identifiable at all levels, the taxonomy provided a better fit for activities targeting a specific group and behaviour. Some system level activities may initially target social norms and beliefs as intermediate outcomes on the path to future behaviour change. Characterising implementation activities is the first step in testing and replicating their effects in other settings.

15:30 - 17:00

## Applying a theoretical framework to assess acceptability of a patient–initiated service: a qualitative analysis

M. Sekhon<sup>1</sup>, M. Cartwright<sup>1</sup>, S. Wickwar<sup>1</sup>, H. McBain<sup>1</sup>, J.J. Francis<sup>1</sup>

<sup>1</sup>City, University of London, United Kingdom

**Background:** Patient-initiated services have been introduced in some settings to empower patients to schedule treatment appointments according to their symptoms. However the acceptability of patient-initiated services is often not reported in published literature.

A theoretical framework of acceptability (TFA) has recently been developed to facilitate investigations of acceptability. The aim of this study was to apply the TFA to explore the acceptability of a patient-initiated service model for managing blepharospasm and hemi-facial spasm in comparison to a provider-initiated model in the context of a randomised controlled trial.

**Methods:** Eighteen participants completed semi-structured interviews about the acceptability of a patient-initiated (n = 10) and provider-initiated (n= 8) model. The topic guide included: 1) a general acceptability question; 2) seven questions reflecting the constructs in the TFA. Transcripts were analysed by applying qualitative content analysis, with the TFA as a deductive coding framework.

**Findings:** When answering the general acceptability question participants in the provider-initiated group reported the service to be acceptable, whereas participants in the patient-initiated group reported mixed perceptions of acceptability. Responses to the TFA questions indicated a more varied assessment of the acceptability of both models. In comparison to the provider-initiated model, the patient-Initiated model was considered acceptable as participants felt greater control in managing their treatment, but was considered unacceptable due to the lack of available appointments.

**Discussion:** Application of the TFA generated a more fine-grained understanding of the acceptability of both service models, and a useful evidence base for strategies to improve acceptability of these services.

15:30 - 17:00

## “BGM-innovativ”: Workplace-related, cross-provider healthcare management of company health insurance funds

L. Lindert<sup>1</sup>, K. Choi<sup>1</sup>, H. Pfaff<sup>1</sup>

<sup>1</sup>University of Cologne, Germany

**Background:** In the care of musculoskeletal disorders, various social security institutions are faced with similar needs for action, but their measures are rather unconnected. “BGM-innovativ” envisages a close cooperation ensuring cross-sector and cross-carrier coordinated healthcare between 22 companies, 15 company health insurances (CHI), Insurance Agencies of the German Statutory Pension Insurance (GPI), and test, training and rehabilitation centers (consortium leadership: BKK Federal Association) for concerned employees.

Our main research question is: Does “BGM-innovativ” have positive effects on self-efficacy, pain, work ability and incapacity of work data?

**Methods:** Our summative evaluation aims to check the program’s effectiveness using a two-armed randomized controlled trial: one group receives information about treatment options and is released into self-management, another group receives coordinated care organized by case managers (CM) in the CHI. Data are derived from standardized questionnaires and work absenteeism days. Our formative evaluation including focus groups (with CMs) and expert interviews (with company doctors/GPI-employees) is meant to identify beneficial and hindering factors for the program implementation.

**Expected Results:** It is expected that “BGM-innovativ” will have positive effects on the defined outcomes.

**Current Stage of Work:**

08/2017: first participants were enrolled (data collection till 12/2020)

03/2018: first focus groups

08/2018: first interviews

**Discussion:** The evaluation results will make a contribution to evidence-based corporate health and healthcare management. They will promote cooperation between various healthcare parties and improve the support of sick/vulnerable employees. Whereas the project primarily focuses on musculoskeletal diseases, the concept could be applied to healthcare processes of different high-prevalence diseases.

15:30 - 17:00

## Assessing readiness for implementing a measurement based care system in military mental health treatment facilities

J. Lee<sup>1</sup>, B. Garber<sup>1</sup>

<sup>1</sup>Department of National Defence, Canada

**Background:** The Canadian Armed Forces (CAF) will be implementing measurement based care (MBC) across its network of military mental health treatment facilities in order to improve outcomes. Research has shown that various factors may interfere with the successful implementation of such systems, including organizational culture, leadership, and processes used to facilitate the implementation. The aim of the proposed study is to improve understanding of factors that may influence the use of MBC by health care providers at CAF health clinics across Canada.

**Methods:** Electronic surveys will be administered to approximately 300 health care providers from 30 CAF health clinics one month prior to the implementation of MBC. Surveys will include the 77-item Organizational Readiness to Change Assessment tool, which assesses key determinants for adopting evidence-based practices. Information on the use of MBC in each clinic will also be collected on a weekly basis following its implementation. Regression analyses will be conducted to identify key predictors of providers' use of MBC 6 months post-implementation.

**Expected results:** Results are expected better elucidate factors that facilitate the adoption of MBC.

**Current stage of work:** The proposed study has been approved by a research ethics committee and electronic survey development has begun. Data collection will take place throughout 2018.

**Discussion:** In addition to underlining measures that could be taken to facilitate the implementation of MBC across CAF health clinics, results may shed light on factors to consider when implementing a broader range of evidence-based practices in a military medical system.

17:00 - 18:00

## In Pursuit of Principles that are Practical: Pasteur's Quadrant and the Study of Health Behavior Change

Alex Rothman

Professor, Department of Psychology, University of Minnesota



Pasteur's Quadrant (Stokes, 1997) illuminates the potential for research programs to simultaneously pursue advances in both understanding and use. Yet, efforts to realize this potential face an array of challenges. Looking across several programs of research on health behavior change, I examine how we have pursued linkages between theory and interventions; reflect on the disconnect between our theories and our interventions that, too often, constrain these pursuits; and explore how efforts to optimize the design and delivery of interventions to promote healthy behavior can facilitate advances in psychological science.

Friday, 24 Aug

# SYMPOSIUM: The 'how' and 'why' of self-regulation techniques in e and mHealth

11:00 - 12:30

Dillon

Katherine Bradbury



11:00 - 11:15

## How users experience and use an eHealth intervention based on self-regulation: a mixed-methods study

L. Poppe<sup>1</sup>, M. Verloigne<sup>1</sup>, C. Van der Mispel<sup>1</sup>, H. Schroé<sup>1</sup>, I. De Bourdeaudhuij<sup>1</sup>, G. Crombez<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

**Background:** Ehealth interventions are often challenged by high levels of attrition. Consequently, investigating users' perceptions on the implementation of the behaviour change techniques might be a fruitful avenue.

**Methods:** Twenty adults from the general population used 'MyPlan 2.0', a self-regulation-based online intervention targeting physical activity and sedentary behaviour, for a period of five weeks. Users' website data were explored and semi-structured interviews with each of the users were performed. A directed content analysis was performed using NVivo Software.

**Findings:** The techniques 'providing feedback on performance', 'action planning' and 'prompting review of behavioural goals' were appreciated by the users. However, the implementation of 'barrier identification/problem solving' appeared to frustrate users. This was also reflected by the users' website data: many coping plans were of poor quality. Most users were well-aware of the benefits of adopting a more active way of living and stated not to have learned novel information. However, they appreciated the provided information as it reminded them about the importance of having an active lifestyle. Furthermore, prompting users to self-monitor their behavioural change was not stimulating enough to make users actually monitor their behaviour.

**Discussion:** Iteratively involving potential end-users offers guidance to optimally adapt the implementation of various behaviour change techniques to the target population. We recommend to create short interventions with a straightforward lay-out that support users in creating and evaluating specific plans for action.

11:15 - 11:30

## The effect of a self-regulation based e- and mHealth intervention on physical activity in adults

L. Degroote<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

**Background:** This study evaluated the effectiveness of the self-regulation-based eHealth intervention 'MyPlan1.0' on self-reported total, moderate, vigorous and moderate to vigorous physical activity in Flemish adults visiting general practice.

**Methods:** In 19 general practices, 615 adults ( $\geq 18$  years) were recruited for the intervention group ( $n=328$ ) or for the waiting list group that received general advice ( $n=183$ ). Participants in the intervention group received the web-based intervention 'MyPlan 1.0' and were prompted to discuss their personal advice/action plan with their general practitioner. Self-reported physical activity was assessed at baseline and after one month using the International Physical Activity Questionnaire. Three-level (general practice, adults, time) linear regression models were conducted in MLwiN.

**Findings:** Significant intervention effects were found for total physical activity [ $\chi^2(1)=4.15$ ,  $p=0.04$ ], moderate physical activity [ $\chi^2(1)=3.85$ ,  $p=0.05$ ] and moderate to vigorous physical activity [ $\chi^2(1) = 4.77$ ,  $p=0.03$ ]. The intervention group reported an increase from baseline to follow-up (+41.24,+17.87,+24.00 min/week for total, moderate, and moderate to vigorous physical activity) compared to a decrease in the control condition (-62.14,-57.09, and -62.58 min/day for total, moderate, and moderate to vigorous physical activity). There was no significant intervention effect on vigorous physical activity.

**Discussion:** The self-regulation intervention 'MyPlan 1.0' has shown to be effective in increasing PA levels in adults. EHealth interventions based upon self-regulation techniques can be used to increase PA among the adult population. Further research will need to identify which particular techniques are the most effective. Furthermore, effort is needed to reduce dropout and to enhance reach in general practice.

11:30 - 11:45

## Comparing usage of a web- and smartphone-delivered stress management intervention: An observational study

L. Morrison<sup>1</sup>, A. Geraghty<sup>1</sup>, S. Lloyd<sup>2</sup>, N. Goodman<sup>3</sup>, D. Michaelides<sup>1</sup>, C. Hargood<sup>4</sup>, M. Weal<sup>1</sup>, L. Yardley<sup>1</sup>

<sup>1</sup>University of Southampton, United Kingdom

<sup>2</sup>Redcar & Cleveland Borough Council, United Kingdom

<sup>3</sup>Gateshead Council, United Kingdom

<sup>4</sup>Bournemouth University, United Kingdom

**Background:** Choices in how self-regulation techniques are implemented within digital interventions may influence subsequent usage of those techniques. Few studies have made direct, detailed comparisons of differences in usage between web or smartphone (app)-based implementation. This talk will compare usage of a web-and app-based stress management intervention.

**Methods:** The interventions comprised tools to increase awareness and support change of stress promoting thoughts/behaviours. The tools were drawn from mindfulness-based approaches and cognitive behavior therapy and included self-regulation techniques (e.g. self-monitoring, goal setting, planning). An observational study collected objective data on usage, including frequency/duration of logins, access to tools and order of page/screen visits.

**Findings:** App users (N=162) logged in twice as often (Mdn=2.00) as web users (N=381, Mdn=1.00),  $U=13059.50$ ,  $p<.001$ , but spent half as much time (Mdn = 5.23 minutes) on the intervention compared to web users (Mdn=10.52 minutes),  $U=19740.00$ ,  $p<.001$ . Visual exploration of individual-level usage patterns revealed significant differences in how app and web users accessed the intervention tools. A higher proportion of app users accessed both types of tool (e.g. awareness and change) compared to web users, ( $n=92$ , 40.17%),  $X^2(1, n=382)=66.60$ ,  $p<.001$ .

**Discussion:** The digital platform used to implement self-regulation techniques (i.e. web versus app) and specific design choices regarding implementation (e.g. navigation, length, volume of content) appears to be associated with differences in how those tools are accessed and used. Broad summative usage data (e.g. total time spent on the intervention) may mask these important differences if not complemented by more detailed analyses of temporal usage patterns.

11:45 - 12:00

## Using lifestyle coaches to promote use of self-regulation techniques within the mHealth intervention Changing Health

L. Avery<sup>1,2</sup>, D. Flynn<sup>1,2</sup>, K. Ashley<sup>1</sup>, M. Trenell<sup>1</sup>

<sup>1</sup>Changing Health Limited, United Kingdom

<sup>2</sup>Newcastle University, United Kingdom

**Background:** There are a plethora of mHealth interventions targeting diet and physical activity behaviour change. However, issues with usability/functionality and irrelevance of content often leads to lack of adherence and eventual abandonment of the intervention. Changing Health is an mHealth intervention underpinned by the Health Action Process Approach consisting of structured education and self-regulation tools to support lifestyle behaviour change in adults with type 2 diabetes. Users are assigned a lifestyle coach to provide telephone-based support and meaningful use of the programme.

**Objective:** To establish whether lifestyle coaches can promote effective use of self-regulation tools within the mHealth intervention Changing Health and to maximise adherence.

**Methods:** The presence of self-regulation techniques were independently coded by two researchers from audio recordings of seven lifestyle coaches' calls with users (N=44) over a 5-month time period. Frequencies were calculated for the presence of techniques, including clusters of techniques most frequently utilised.

**Results:** All five self-regulation techniques present within Changing Health were utilised across the sample of coaching calls. Feedback on behaviour (n=36/82%); problem-solving (n=29/66%); self-monitoring of behaviour (n=24/55%); and goal setting behaviour (n=23/52%) and these techniques were used regularly as a cluster. Action planning was used least frequently (n=12/27%).

**Conclusion:** Findings demonstrate the usefulness of lifestyle coaches to promote the meaningful use of self-regulation tools within the mHealth intervention Changing Health. However, several situations existed where self-regulation techniques could/should have been utilised to support behaviour change. Under-use of these strategies is a potential issue for e/mHealth interventions and could impact upon intervention effectiveness.

# SYMPOSIUM: Risk communication in new era of genomics

14:00 - 15:30

D'Arcy Thomson

Ari Haukkala

14:00 - 14:15

## Willingness to receive four different types of genetic risk information – A population based study

A. Haukkala<sup>1</sup>, M. Vornanen<sup>1</sup>, O. Halmesvaara<sup>1</sup>, M. Aulbach<sup>1</sup>, H. Konttinen<sup>1</sup>, H. Kääriäinen<sup>2</sup>, K. Aktan-Collan<sup>1</sup>

<sup>1</sup>University of Helsinki, Finland

<sup>2</sup>National Institute for Health and Wellbeing, Finland

**Background:** in general, people wish to know about their health-related genetic risk information, but do not necessarily differentiate between different types of risk information. We created a three-minute video about four categories of genetic risk information and examined predictors of individuals' intentions to receive each category of risk information.

**Methods:** 792 respondents from a random population sample of 18 to 64 year olds participated in a web survey, which included the three -minute video. The video covered four categories of genetic risk information (actionable, non-actionable, multifactorial, carrier status). We measured participants' attitudes, perceived norms and intention toward learning about each type of risk information. Education, gender, anxiety, genetic knowledge and need for cognitive closure were also investigated as potential predictors of intentions.

**Findings:** Respondents evaluated the presented video as useful and comprehensible. Respondents were willing to learn their actionable, multifactorial and carrier risk information, but were less interested in non-actionable heritable risk information. Need for cognitive closure was related to willingness to learn actionable ( $\beta=0.08$ ,  $p=.030$ ), multifactorial ( $\beta=0.09$ ,  $p=.013$ ), and carrier status risk information ( $\beta=0.11$ ,  $p=.002$ ), while other predictors were non-significant. More educated participants were less motivated to learn their non-actionable risks ( $\beta=-0.09$ ,  $p=.017$ ).

**Discussion:** Respondents had a positive attitude toward genetic testing and were interested to learn different types of genetic risks. Need for cognitive closure had moderate association to intentions while many other predictors, including genetic knowledge, were not related to intentions.

14:15 - 14:30

## Skin cancer genetic testing in diverse primary care: Interest across demographic diversity and cultural context

J.L. Hay<sup>1</sup>, K. Zielaskowski<sup>1</sup>, K. Meyer White<sup>2</sup>, V. Rodriguez<sup>3</sup>, E. Robers<sup>4</sup>, D. Guest<sup>2</sup>, A. Sussman<sup>2</sup>, Y. Talamantes<sup>2</sup>, M. Schwartz<sup>2</sup>, J. Greb<sup>2</sup>, J. Bigney<sup>2</sup>, K. Kaphingst<sup>5</sup>, K. Hunley<sup>2</sup>, D. Buller<sup>6</sup>, M. Berwick<sup>2</sup>

<sup>1</sup>Memorial Sloan Kettering Cancer Center, United States

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<sup>3</sup>Center for Mind and Body Health, PLLC, United States

<sup>4</sup>New Mexico Translation and Transcription, United States

<sup>5</sup>University of Utah, United States

<sup>6</sup>Klein Buendel (Web Design Firm), United States

**Background:** Translational research in genomics has disproportionately engaged highly-educated white populations and must broaden its reach to realize public health potentials. This study examined interest in skin cancer genetic testing, via common MC1R risk variants, and factors that may modify interest in a diverse population in Albuquerque, New Mexico, USA.

**Methods:** Participants (registered primary care patients; fluent in English or Spanish) were randomized to usual care or invitation to log on to study website to learn about MC1R testing. The main outcome was study website login (yes/no). We measured demographic, phenotypic, and cultural factors (cancer fatalism, distrust in the healthcare system, health literacy, skin cancer misconceptions, and family influences on health).

**Findings:** Intervention participants (N=499) were 44% Hispanic, 49% non-Hispanic white and 79% female, with mean age of 54. About half (46%, n=232) elected to learn about MC1R testing by logging into the website. Non-Hispanic whites (compared to Hispanics) and those with higher education were more likely to log on. Those with higher health literacy, fewer skin cancer misconceptions, and lower family influences on health were more likely to log on (all Ps < 0.05). Only family influences remained in the adjusted model.

**Discussion:** Interest in MC1R testing was relatively high in this diverse primary care population, and lower family influence on health was the most important cultural factor related to interest in testing. These findings will help shape the public health translation of precision feedback for skin cancer risk as genetic testing becomes more widely available in coming years.

14:30 - 14:45

## Colorectal cancer survivors' interest in genomic testing to guide communication about recurrence risk management

A. Kinney<sup>1</sup>, R. Ruckman<sup>1</sup>, C. Blair<sup>1</sup>, J. McDougall<sup>1</sup>, V. Chiu<sup>1</sup>, A. Rajput<sup>1</sup>, C. Wiggins<sup>1</sup>

<sup>1</sup>University of New Mexico, United States

**Background:** Colorectal cancer (CRC) survivors cope with many medical decisions regarding their cancer recurrence risk management and how to integrate this information into their daily lives. Regular use of aspirin can reduce cancer recurrence and prolong survival in CRC survivors. Pharmacogenomic testing is at the forefront of precision medicine and may be particularly relevant for CRC survivors who may benefit from daily low-dose aspirin. Guided by a stress and coping framework, we sought to identify psychosocial factors associated with interest in genomic testing to inform decision-making about recurrence risk management.

**Methods:** Rural (38%) and urban (62%) survivors were identified through a statewide cancer registry. A cross-sectional survey was completed by 297 men and women (41% Hispanic and 59% non-Hispanic white). Multivariable logistic regression analysis was performed to determine psychosocial factors independently associated with genomic testing interest.

**Findings:** Most survey respondents were interested in taking aspirin to reduce their recurrence risk (86%) and genomic testing (83%) in the context of precision cancer prevention. Interest did not differ by ethnicity or rural -urban status. High levels of health literacy (odds ratio (OR)=1.52; 95% confidence interval (CI)=1.11-2.07; p=0.009) and cancer worry (OR=1.81; 95% CI=1.12-2.92; p=0.015) were significantly associated with testing interest while general psychological distress was not (OR=1.03; 95% CI=0.99-1.06; p=0.147).

**Discussion:** Interventions for CRC survivors that are designed to raise awareness and guide informed decision-making about prevention strategies such as daily aspirin use may be more effective if they target pharmacogenomic markers, emotions and social determinants of health such as health literacy.



14:45 - 15:00

## Does the type of disease matter when receiving genetic secondary findings? A qualitative vignette study

M. Vornanen<sup>1</sup>, K. Aktan-Collan<sup>1</sup>, N. Hallowell<sup>2</sup>, H. Konttinen<sup>1</sup>, A. Haukkala<sup>1</sup>

<sup>1</sup>University of Helsinki, Finland

<sup>2</sup>University of Oxford, United Kingdom

**Background:** Validated, clinically actionable secondary findings of genomic sequencing (SFs) are recommended to be reported back to consented patients/research participants. Professionals have discussed how to categorize SFs when asking for consent. To create SF reporting practices that best serve people's needs, public's perspectives need to be integrated in these discussions.

**Methods:** We performed a qualitative vignette study among Finnish adults. Participants were asked to imagine themselves receiving a letter that revealed a SF predisposing to a severe but actionable disease – familial hypercholesterolemia, long QT syndrome, Lynch syndrome, or Li–Fraumeni syndrome. Participants wrote down their initial reactions to receiving this hypothetical information (N=29), and attended focus group discussions (N=23). Written reactions and transcribed focus group discussions were analysed using inductive thematic analysis.

**Findings:** Written first reactions to hypothetical SFs varied according to perceived severity and familiarity of disease. Focus groups considered cancer related SFs more threatening than cardiovascular related SFs, but less distressing than genetic risks for psychiatric or neurological disorders. In addition to actionability, illness severity in terms of lived experience, access to available treatment, and individual's responsibility to control risk were perceived to vary across diseases and influence how threatening knowing one's genetic risk would be.

**Discussion:** In addition to clinical validity and utility, SF consent and reporting practices need to take into account potential familiarity and lay illness representations of different diseases. Illness representations are likely to direct willingness to receive different types of SFs, and motivate individuals to seek preventative treatment and disclose information to family.

15:00 - 15:15

## Risk provision in Breast Cancer Screening: healthcare professionals' views regarding impact on services and implementation

F. Ulph<sup>1</sup>, L. Donnelley<sup>2</sup>, H. Ruane<sup>2</sup>, V. Woof<sup>1</sup>, G. Evans<sup>2</sup>, D. French<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>Manchester University NHS Foundation Trust, United Kingdom

**Background:** Personalised 10-year breast cancer risk can now be provide following routine mammography - enabling women at higher risk access more frequent mammography and chemoprevention, reducing cancer risk. To enable this, clear care pathways are needed, where risk estimation is integrated within mammogram appointments, with clear follow-up. This research explored how existing services need reconfiguring to allow this form of screening.

**Methods:** Multidisciplinary focus groups were conducted with 29 healthcare professionals (HCPs) at three breast screening services in England. The services were selected for diversity of populations. An inductive-manifest thematic analysis was conducted.

**Findings:** HCPs viewed prevention, and the role of risk information in this, positively, yet the data focused on barriers and concerns. "System constraints" data focused on the current limited NHS capacity and HCPs were avoidant of additional work despite valuing women's best interests. "Accentuating inequity" data acknowledged barriers to screening or chemoprevention and concerns that additional steps (i.e. women completing online questionnaires) may decrease accessibility. "Risk communication impact" data unpicked considerations regarding how risk is communicated to patients in a moral way - balancing resource constraints with risk impact.

**Discussion:** Key drivers of risk impact and service implementation were skilled communication of risks and service developments to diverse lay audiences to ensure that services could be implemented in financially and time constrained settings without impacting negatively on the recipients. Health psychologists have a key role to play in implementation of services to communicate personalized risk information.

# SYMPOSIUM: Self-regulation and health behaviors in context: An ecological approach with implications for interventions

14:00 - 15:30

Anderson

E.A. Hennessy & B T. Johnson

14:00 - 14:15

## Social media support vs significant others - differences in support and control for healthy eating.

P. Rackow<sup>1</sup>, J. Inauen<sup>2</sup>, D. Powell<sup>1</sup>, M. Amrein<sup>3</sup>, U. Scholz<sup>3</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

<sup>2</sup>Eawag - Swiss Federal Institute of Aquatic Science & Technology, Switzerland

<sup>3</sup>University of Zurich, Switzerland

**Background:** Research on the benefits of social exchange processes for eating more healthily has been mixed. Possible explanations for these findings might be that an individual's social network provides different kinds of social support and control. Therefore, the aim of the current analysis is to compare support and control provided by formalized anonymous social media support groups (WhatsApp) with support and control provided by significant others (SO).

**Methods:** Participants, who wanted to eat more healthily (71% female; m age = 27, SD = 8.55), were randomly assigned to an intervention (WhatsApp group) or control condition (information only). WhatsApp groups were active for 7 days. For this analysis, only WhatsApp group participants (n = 82) were analyzed. Paired sample t-tests were performed.

**Findings:** Participants reported more attempts to influence their eating behaviours from WhatsApp groups  $t(81) = -4.97$   $p \leq .00$ . However, attempts from the SO were more positively appraised compared to WhatsApp group attempts,  $t(81) = 2.16$ ,  $p = .03$ . Support from SO was reported to be better tailored to expectations,  $t(81) = 2.37$   $p = .02$ , and regarded as more helpful,  $t(81) = 2.01$ ,  $p = .048$ .

**Discussion:** Our results suggest that different actors from an individual's social network offer different social exchange processes. Also, even in situations where social support had been formalized through the WhatsApp groups, SO support seems to still play an important role. Future research might want to test more formalized forms of SO support to compare these with anonymous support by, e.g. social media.

14:15 - 14:30

## Childhood self-control forecasts adult smoking, weight gain, and midlife health

M. Daly<sup>1,2</sup>

<sup>1</sup>University College Dublin, Ireland

<sup>2</sup>University of Stirling, United Kingdom

**Background:** This study draws on rich data from two nationally-representative cohort studies to test: (i) whether childhood self-control predicts smoking and weight gain throughout life, and (ii) whether these effects may act as channels from poor childhood self-control to the emergence of health problems in midlife.

**Methods:** Over 20,000 participants from the British Cohort Study (BCS) and the National Child Development Study (NCDS) were examined. Self-control was teacher-rated at age 10 in the BCS and ages 7/11 in the NCDS. Tobacco consumption and height and weight were assessed at five time-points between childhood and midlife in both cohorts. Health outcomes were examined between ages 42 and 55 and included general health ratings, diabetes, hypertension, and physiological dysregulation (cardiovascular, respiratory, metabolic, and immune functioning assessed in the NCDS). Controls were gender and an index of social disadvantage in both cohorts and an additional set of baseline health/background indicators in the NCDS.

**Findings:** In adjusted regression models, a 1-SD increase in self-control predicted a 6-percentage point reduced risk of smoking and a 3-percentage point lower probability of obesity by midlife ( $p < 0.001$ ). High self-control predicted better health across all indicators after adjustment for sex, childhood health, and social Background: Mediation analyses revealed that on average over a third of the health effect of self-control was explained by patterns of smoking and weight gain throughout adulthood.

**Discussion:** Childhood self-control is associated with enhanced midlife health, a finding that can be attributed in part to a sustained propensity to avoid tobacco consumption and weight gain.

14:30 - 14:45

## Self-regulation as a target mechanism of behaviour change interventions: A meta-review

E.A. Hennessy<sup>1</sup>, B. Johnson<sup>1</sup>, R. Acabchuk<sup>1</sup>, K. McCloskey<sup>1</sup>, S. Iqbal<sup>1</sup>, L. Roethke<sup>1</sup>, E. Betterton<sup>1</sup>, J. Stewart-James<sup>1</sup>, K. McDavid<sup>2</sup>

<sup>1</sup>University of Connecticut, United States

<sup>2</sup>Southern Connecticut University, United States

**Background:** Identifying and understanding effective components of interventions is a key step to improving health behaviour interventions. Self-regulation is one primary mechanism for health behaviour change: thus, this meta-review synthesizes meta-analyses that have assessed self-regulation assays involved in health behaviour interventions.

**Methods:** Meta-analyses of any intervention and health behaviour/outcome were eligible provided that they quantitatively assessed self-regulation. We further examined reviews' consideration of environmental-level mechanisms. We followed systematic review procedures and pre-registered the protocol.

**Findings:** Although this abstract describes preliminary results, final results will be presented at the conference. Of 12,125 abstracts, 1,191 were screened as eligible: a random sample of half were screened in full text. From this sample, 36 meta-analyses were eligible. Few reviews reported a protocol (33%), 11% used GRADE; most focused on RCTs (77%). AMSTAR2 indicated mixed bias: the most prevalent issue was improperly assessing and reporting risk of bias (61%). Self-regulation was primarily assessed by comparing the efficacy of various intervention components (92%), such as those from behaviour change taxonomies (17%). Only 1% of reviews directly examined if changes in self-regulation predicted later behaviour change; these focused on self-efficacy and physical activity, cognitive bias modification and addiction, and self-monitoring frequency and goal attainment. Reviews that assessed environmental mechanisms primarily focused on social support.

**Discussion:** Although meta-analyses supported the conclusion that increases in self-regulation assays lead to behaviour change, few directly studied this relationship. Future reviewers should utilize advanced methods to assess mechanisms, and primary study authors should clearly report these mechanisms to facilitate later synthesis.

# SYMPOSIUM: Using mobile technology to assess and improve health behaviors: How can we do much better?

14:00 - 15:30

Room 201

Britta Renner

14:00 - 14:15

## The impact of mobile interventions on diet- and health-related outcomes: A systematic review and meta-analysis

K. Villinger<sup>1</sup>, D.R. Wahl<sup>1</sup>, H.T. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Using smartphone applications becomes an increasingly important approach to deliver health interventions in the area of eating behavior. Despite general enthusiasm, little is known about their effectiveness. Therefore, the aim of the study was to evaluate the effectiveness of mobile dietary interventions.

A systematic review and quantitative meta-analysis was conducted. Six databases were searched identifying 10,132 articles published between 2006 and June 2017. Studies were eligible if they used a smartphone application promoting dietary behavior or diet-related health outcomes, including all intervention study designs and populations. Study characteristics and methodological quality were independently coded by two reviewers.

Forty-one studies were included in the review. The majority (66%) were RCTs with sample sizes ranging from 10 to 833 participants and most studies examined adults from clinical samples. Study duration varied from 20 days to 96 weeks. Most studies (93%) used at least one BCT, most frequently feedback/monitoring, goal setting/planning, and social support. Feedback within the app was usually provided daily (88%). Even though the focus was on app-based interventions, 73% of the studies contained additional treatments. Coding of Consort and Cochrane recommendations revealed great diversity in study quality. Further, a meta-analysis including 29 studies indicated substantial heterogeneity between studies.

Results indicate that although a considerable number of studies using mobile dietary interventions exist, there is pronounced heterogeneity between studies in terms of measured outcomes, study design and intervention components. This diversity impedes the evaluation of intervention effectiveness and highlights the need of studies systematically evaluating mobile interventions.



14:15 - 14:30

## Evaluation of an mHealth program for people with type 2 diabetes – My Diabetes Coach

B. Oldenburg<sup>1</sup>, S. Baptista<sup>1</sup>, J. Zemanek<sup>1</sup>, S. Shetty<sup>1</sup>, R. Zhou<sup>1</sup>, D. Bird<sup>2</sup>

<sup>1</sup>University of Melbourne, Australia

<sup>2</sup>University of Queensland, Australia

**Background:** My Diabetes Coach is mHealth program using an interactive relational agent, 'Laura', supporting blood glucose monitoring and providing personalized feedback and advice for people with diabetes. This presentation will describe the baseline characteristics of study participants and 6-month data on program use.

**Methods:** Participants were recruited to a randomised trial through consumer diabetes organisations and Facebook. Participants completed self-report and clinical tests at baseline and 6-months.

**Findings:** 187 participants were randomized to a waitlist control (n=94) or intervention (n=93) condition. Participants were aged 56±10 years, 45% (n=83) were women. At baseline, the average HbA1c was 7.32±1.58%. Most study participants were between 50 and 69 years old (69%). Of the 93 participants randomly assigned to use MDC, 56% used a smartphone, 14% used a tablet, and 30% used both to access MDC app. At 6 months, n=79 (85%) were still using the MDC app to complete chats with Laura, self-monitor their glucose levels, access the program website, and/or participate in the MDC online community discussions. Of these, 50% were weekly chats, 15% fortnightly, 18% monthly and 17% were less than once a month. Over 6 months, participants had responded to a total of 57,265 statements and questions asked by Laura; and an average of 622 statements per participant.

**Conclusions:** Smartphones were preferred for program access. Program uptake and use was excellent when compared with other similar technology interventions delivered by phone. Program delivery resulted in on-going, weekly use for most MDC participants and the degree of program engagement was high.

14:30 - 14:45

## "Shopping" healthy habits for prevention: Engagement to the Stop Diabetes BitHabit app

P. Absetz<sup>1</sup>, M. Harjumaa<sup>2</sup>, M. Ermes<sup>3</sup>, R. Männistö<sup>1</sup>, T. Tilles-Tirkkonen<sup>1</sup>, N. Lintu<sup>1</sup>, J. Pihlajamäki<sup>1</sup>

<sup>1</sup>University of Eastern Finland, Finland

<sup>2</sup>VTT Technical Research Centre of Finland Ltd, Finland

<sup>3</sup>Futurice Ltd, Finland

**Background:** Most lifestyle interventions struggle with maintenance of changes. Habit theories propose that simple behaviors are sustainable if embedded into stable context and repeated until automatic. Habit theories and principles of persuasive design formed the basis of the Stop Diabetes BitHabit intervention. The present study explores user engagement.

**Methods:** BitHabit App adapts online shopping to behavior change with a selection of 450 simple behaviors in 13 evidence-based departments for prevention of type 2 diabetes (T2D), including mental wellbeing (2 categories), diet (6), physical activity (3), sleep (1) and non-smoking (1). Autonomy-supportive design aims to make choices quick, easy and attractive. Intervention effectiveness is tested in a randomized controlled trial. Thus far 1729 participants (age 18-70, increased T2D risk) have been randomized to the digital intervention arm. User engagement is explored with user data on activity, habit selection and habit performance for first six months of the intervention.

**Findings:** Weekly activity rates were 60-70% for the first four months, then 50-60% until six months. Daily activity rates for these time points were 35-45% and 20-35%, respectively. Over 38,600 habit selections were made across the 13 categories, and over 733,000 habit performances were reported, most frequently in categories of meal frequency, stress management, consumption of vegetables and positive mood.

**Discussion:** User data already suggests high and sustained engagement and acceptability of the habit-based approach. Once the 12-month intervention is completed, we will have a unique opportunity to identify pathways from habit selection and performance to clinical measures of T2D risk factors.

14:45 - 15:00

## The “healthy = happy” association: Investigating in-the-moment eating happiness using an ecological momentary assessment

D.R. Wahl<sup>1</sup>, K. Villinger<sup>1</sup>, L.M. König<sup>1</sup>, K. Zieseimer<sup>1</sup>, H.T. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

**Background:** Commonly, the belief prevail that high-caloric foods taste better and alleviate negative mood. However, research suggests that “healthy” food choices such as eating fruits and vegetables have not only physical but also psychological benefits and might be a long-term investment in future well-being. To investigate these contrasting views, the present study analyses the relationship between food choices and in-the-moment eating happiness.

**Methods:** Real-life dietary behavior and its associated happiness were measured across eight days using a smartphone based ecological momentary assessment. Overall, 1,044 eating episodes were recorded by 38 participants with a mean age of 24.47 years (SD=5.88, range=18–48).

**Findings:** On average, participants rated their eating happiness with  $M=77.59$  which suggests that eating occasions were generally positive. However, experienced eating happiness varied considerably between occasions ( $SD=16.41$ , range=7.00-100.00), depending on food and meal type. Overall, the consumption of vegetables, fruits, sweets and dairy products were associated with high eating happiness. However, the consumption of vegetables contributed the largest share to eating happiness measured across eight days. Further, dinner elicited comparable eating happiness to snacking.

**Discussion:** These findings illustrate that the consumption of “healthy choices” evoke high in-the-moment happiness and therefore seem to be an investment not only in future well-being but also in in-the-moment well-being. This might offer new perspectives for health promotion and public-policy programs. Making people aware of this “healthy = happy” association provides a distinct and novel perspective to the prevailing “unhealthy=tasty” intuition and advocates the paradigm shift from “food as health” to “food as well-being”.

15:00 - 15:15

## Happy eater: A mobile intervention for boosting experienced eating

B. Renner<sup>1</sup>, K. Villinger<sup>1</sup>, D.R. Wahl<sup>1</sup>, L.M. König<sup>1</sup>, K. Zieseimer<sup>1</sup>, G. Sproesser<sup>1</sup>, S. Butscher<sup>1</sup>, J. Müller<sup>1</sup>, H. Reiterer<sup>1</sup>, H. Schupp<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Most behavioral interventions targeting health behavior emphasize the need to self-regulate and to sacrifice short-term pleasure for long-term health benefits. However, restrained eating or dieting is a great challenge for most people and may even enhance the risk of long-term weight gain. A promising new perspective entails a shift from self-regulation and long-term health goals to a more positive centred perspective aiming at boosting human capacities and strengths. Mobile devices, delivering cues and prompts just in time, that is, in the eating situation, might be particularly promising for creating boosting interventions. As part of the Research Consortia SMARTACT, we developed and utilized a mobile (near) real-time intervention tool called 'Happy Eater' based on individual, event-based assessed eating emotions and eating behavior profiles. In the present intervention study (N = 150), participants were asked to take a picture of each meal over a 3-5-week period using a smartphone. The intervention group received feedback about emotional nourishment for single meals and snacks (meal-level) as well as over the course of the day (daily consumption level) displayed in different formats on the mobile device across two weeks. Compared to the control group, the intervention group showed a significant increased experienced eating happiness. This difference in experienced eating happiness was still significant after a three-week washout phase. Hence, a "boosting" approach, making behavior easier and more fun to do by building on individual strengths and capacities might be a promising avenue for behavior change interventions.

# SYMPOSIUM: Attentional bias modification training in health psychology

14:00 - 15:30

McMunn

Geert Crombez

14:00 - 14:15

## Attentional bias modification in health psychology: Back to the future

G. Crombez<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

**Background:** Attention is a key process in many models of symptom perception (e.g., pain, fatigue, and itch) and health problems (e.g., addiction and obesity). Several interventions have been developed to target these attentional processes, in particular the biasing of attention towards information related to the health condition, i.e., Attentional Bias Modification Training (ABMT). Such attentional bias modification paradigms are increasingly used in research. A review of current models and their assumption is currently lacking.

**Methods:** We searched and identified a number of theoretical accounts of ABMT in various domains of clinical psychology and health psychology.

**Findings:** Most models stem from a cognitive perspective on psychopathology. Efficacy of these interventions is equivocal in psychopathology, and in health psychology. Over the years, various explanatory mechanisms such as the training of attentional disengagement, executive functioning (inhibition) and attentional control, have been proposed. Current research aims to identify individuals for whom intervention works, and aims to improve treatment success.

**Discussion:** We discuss the consequences of these mechanisms for future research, and consider their implications for interventions. We argue that attentional bias modification is better considered from a motivational or a behaviourist perspective than from a cognitive perspective. Underlying assumptions and differences between the views are articulated.

14:15 - 14:30

## To train or not to train: The impact of attentional bias modification on pain outcomes

D. Van Ryckeghem<sup>1,2</sup>

<sup>1</sup>University of Luxembourg, Luxembourg

<sup>2</sup>Ghent University, Belgium

**Background:** During the last decades, evidence has shown that selectively attending to pain information worsens pain outcomes. Accordingly, researchers have started to train attention away from pain information to reduce pain and related outcomes. Furthermore, it has been proposed that Attentional Bias Modification Training (ABMT) can be used in a therapeutic context. Early results were promising, but more recently researchers have failed to replicate the positive effects of ABMT for experimental and clinical pain outcomes.

**Methods:** A literature search was performed to identify articles that provide evidence on the efficacy of ABMT away or towards pain to influence experimental and/or clinical pain outcomes. We coded whether ABMT changed attention bias for pain and affected pain or pain-related outcomes.

**Findings:** Our literature search resulted in 9 studies investigating the efficacy of ABMT in the context of pain. Results indicated that ABMT reduced attention bias for pain in less than half of the studies. Furthermore, the impact of ABMT away from pain outcomes differed largely from study to study, both for experimental and clinical pain outcomes.

**Discussion:** Results of the experimental and clinical studies show mixed support for the effectiveness of ABMT in improving pain outcomes. At current, it may be premature to implement ABMT in a therapeutic context. More insight in the conditions under which ABMT improves or fails to improve pain-related outcomes is warranted.

14:30 - 14:45

## Attentional bias modification affects food choice and intake in overweight individuals

E. Kemps<sup>1</sup>, M. Tiggemann<sup>1</sup>

<sup>1</sup>Flinders University, Australia

**Background:** Accumulating evidence shows that overweight individuals exhibit an attentional bias for high calorie food, and that this bias can be modified. As an important practical extension, this study investigated whether Attentional Bias Modification Training (ABMT) can positively affect food choices and intake in overweight individuals.

**Methods:** A community sample of overweight women (N=60; 18-25 years; BMI  $\geq$  25 kg/m<sup>2</sup>) underwent an intensive ABMT protocol, delivered online via a mobile phone app. Over a period of two weeks, participants were trained to direct their attention away from high calorie food images and instead toward low calorie food images. Participants used the app at home every day for 10 min. Before and after the intervention, food choice and intake were measured in the laboratory by a hypothetical food choice task and a bogus taste test, respectively.

**Findings:** Following ABMT, participants were more likely to choose low calorie than high calorie food items in the food choice task, and to consume more of the low calorie than high calorie snacks in the taste test. Additionally, they reported a reduced liking of, and craving for, high calorie foods.

**Discussion:** In line with predictions of dual-process theories and cognitive-motivational models, targeting the biased attentional processing of appetitive food cues translated into corresponding behavioural changes. At a practical level, ABMT holds promise as a tool for improving eating behaviour in overweight individuals.



14:45 - 15:00

## The Effectiveness of Online Cognitive Bias Modification on Smoking Cessation

S. Wen<sup>1,2</sup>, H. Larsen<sup>1,2</sup>, M. Boffo<sup>1,2</sup>, T. Pronk<sup>1,2</sup>, R. Grasman<sup>1,3</sup>, R. Wiers<sup>1,2</sup>

<sup>1</sup>University of Amsterdam, Netherlands

<sup>2</sup>Developmental Psychology, Department of Psychology, Netherlands

<sup>3</sup>Psychological Methods, Department of Psychology, Netherlands

**Background:** Automatically activated cognitive motivational processes such as the tendency to approach or attend to smoking-related stimuli have been related to smoking behaviours. These cognitive biases can be retrained with Cognitive Bias Modification (CBM). CBM has potential as low-cost, low-threshold internet intervention, however, little is known about the effectiveness of online CBM.

**Methods:** This study investigated the effectiveness as a tool for smoking cessation of two online CBM varieties: approach bias re-training and attentional bias re-training with a 2x2 factorial design. Participants were 324 adult smokers who wanted to quit smoking, who were randomly assigned to one of four experimental conditions to receive 11 training sessions. Prior to the first training, participants received an automatized tailored motivational session. Smoking cessation outcomes included 7-day point prevalence (PP) abstinence at halfway-training, post-training and 3-month follow-up. Binary logistic regression intention to treat analyses were used to test the effectiveness of online CBM on smoking cessation.

**Results:** Smoking-related approach bias and attentional bias were found in the sample at baseline. The online CBM had no effect on smoking cessation. Only higher readiness to change (OR = 1.28;  $p < 0.01$ ; CI = 1.09-1.52) predicted 7-day PP abstinence at halfway-training; and only lower nicotine dependence (OR = 0.60;  $p < 0.05$ ; CI = 0.39-0.91) predicted 7-day PP abstinence at post-training.

**Conclusions:** This study provided no support for the effectivity of online CBM for smoking cessation. However, the large drop-out rates preclude strong conclusions. The presence of smoking-related approach bias and attentional bias still highlight CBM's potential.

15:00 - 15:15

## Gamified attentional bias modification training: A systematic review of the evidence

J.F. Vermeir<sup>1</sup>, M.J. White<sup>1</sup>, D. Johnson<sup>1</sup>, D. Van Ryckeghem<sup>2</sup>, G. Crombez<sup>3</sup>

<sup>1</sup>Queensland University of Technology, Australia

<sup>2</sup>University of Luxembourg, Luxembourg

<sup>3</sup>Ghent University, Belgium

**Background:** Preliminary research has shown that attentional retraining techniques such as Attentional Bias Modification Training (ABMT), can have therapeutic benefits in the treatment of various conditions, including anxiety, eating disorder, and chronic pain. The ABMT used in the majority of these studies is based on a highly repetitive and monotonous visual-probe training task. The monotonous character of this task can lead to disengagement, frustration, and high dropout rates. This has led researchers to attempt to increase motivation and engagement through the gamification (i.e., the use of game elements) of this task. However, there is the possibility for game elements to have adverse effects on cognitive training (e.g., be a distraction), which can outweigh their potential motivational benefits. Given the use of gamification in ABMT is an emerging field, a review on the effectiveness of gamification applied to ABMT is necessary.

**Methods:** A systematic review was performed to identify studies that applied gamification to ABMT. The protocol was registered in PROSPERO (CRD42018082309).

**Findings:** The results varied, depending on the purpose of the study. Some found that training effects could be retained in gamified formats, while others reported no effects on attentional bias processes or the targeted outcome. There was a lack of studies comparing gamified tasks directly against non-gamified counterparts.

**Discussion:** We discuss the consequences of applying gamification to ABMT for future research and provide guidelines for future studies in this field of research. Furthermore, we discuss current findings in the light of future interventions.

# The role of barriers and motivational processes for self-regulation and behavior.

9:00 - 10:30

O'Flaherty

Fanny Lalot

9:00 - 9:15

## Regulatory focus and self-determination theory: A fit account to predict intention to improve nutrition habits.

F. Lalot<sup>1</sup>, A. Quiamzade<sup>1</sup>, O. Zerhouni<sup>2</sup>

<sup>1</sup>University of Geneva, Switzerland

<sup>2</sup>University Paris Nanterre, France

**Background:** Regulatory focus and self-determination are two motivation theories widely applied in health intervention research, but always independently from one another. We propose, however, that they could have an interactive effect and should therefore be considered together (i.e., a fit account).

**Methods:** In three studies (N = 578), we investigated how university students' self-determination motives to act upon their nutrition interact with regulatory focus (under the form of an induced mind-set or message framing) to predict their behaviour or intention to improve their eating habits. All studies adopted a 2 regulatory focus (promotion versus prevention) × intrinsic motives (continuous) × extrinsic motives (continuous) design. They were subjected to a linear regression analysis considering all interactions.

**Findings:** Results of the three studies consistently revealed a fit between extrinsic motives and prevention focus: intention increased with extrinsic motives in a prevention but not promotion focus (small-scale meta-analysis:  $d = -0.31$ , 95% CI [-0.47, -0.15],  $z = -3.76$ ,  $p < .001$ ). The effect of intrinsic motives, however, was independent of the focus (small-scale meta-analysis:  $d = -0.04$ , 95% CI [-0.20, 0.12],  $z = -0.45$ , ns.), which suggests that these motives drive intention and behaviour independently of external cues.

**Discussion:** The present results indicate that prevention-oriented interventions will be more efficient amongst individuals holding strong extrinsic motives to act upon their health. They advocate for simultaneously taking into consideration self-determination and regulatory focus when planning a health intervention relying on motivation.

9:15 - 9:30

## Self-determined motivation explains behavioural and emotional responses to lapses in exercise behaviour

S. Murphy<sup>1</sup>, I. Taylor<sup>1</sup>

<sup>1</sup>Loughborough University, United Kingdom

**Introduction:** Self-determination theory describes how an individual's underlying motives determine behavioural engagement and disengagement. Building on this, we explore whether different types of motivation predict lapses in exercise behaviour, and particularly the emotional responses to such lapses. Doing so will shed light on how motivation influences goal failure and subsequent re-engagement.

**Methods:** In Study 1 (N=350) structural equation modelling was conducted on cross-sectional data to explore whether motivational regulations for exercise predicted the likelihood that individuals lapsed in their exercise behaviour (i.e., did not exercise despite intentions to do so), and the extent to which individuals experienced guilt, anxiety, and relief following lapse. In Study 2 (N=89) we attempted to replicate the findings of Study 1 using multilevel modelling on diary-based data collected over a 21-day period. In addition, we explored whether motivational and emotional experiences following lapse predicted exercise re-engagement.

**Results:** Autonomous motivation was negatively associated with lapses (Study 1:  $b=-0.79$ ,  $p<0.01$ ; Study 2:  $b=-0.22$ ,  $p=0.04$ ) and experiences of relief following lapse (Study 1:  $b=-0.14$ ,  $p=0.04$ ; Study 2:  $b=-0.50$ ,  $p=0.03$ ). Introjected regulation was positively associated with guilt following lapse (Study 1:  $b=1.00$ ,  $p<0.01$ ; Study 2:  $b=0.66$ ,  $p=0.04$ ). Autonomous motivation ( $b=-0.45$ ,  $p=0.03$ ) and guilt ( $b=-0.15$ ,  $p=0.04$ ) negatively predicted number of days until exercise re-engagement.

**Conclusion:** Autonomous motivation may support healthy behaviours, specifically by reducing lapse regularity and feelings of relief following lapse, and stimulating exercise re-engagement. Introjected forms of motivation may promote exercise behaviour, but at the expense of unfavourably elevated feelings of guilt.

9:30 - 9:45

## How are SDT-based interventions put into practice in relation to established taxonomies of behaviour change?

F. Gillison<sup>1</sup>, P. Rouse<sup>1</sup>, M. Standage<sup>1</sup>

<sup>1</sup>University of Bath, United Kingdom

**Background:** The use of standardised taxonomies of behaviour change techniques and counselling styles has vastly improved the specification and reporting of intervention content. Yet, no taxonomy has been developed to precisely describe the content of behaviour change techniques for research framed within Self-Determination Theory (SDT). The aim of this work is to report on the process and outcomes of a systematic coding of SDT interventions using existing taxonomies, and reflect on the utility of such an approach.

**Methods:** Seventy-three intervention studies were identified through a systematic search of health-related SDT-based interventions from 1985-2017. All intervention components described by study authors were mapped against the 93-item Taxonomy of Behaviour Change Techniques and a Motivational Interviewing taxonomy to capture relational elements.

**Findings:** Within the SDT grounded interventions, 70 techniques from existing taxonomies were categorised, and a further 22 techniques specific to SDT (i.e., not adequately described by other taxonomies) were also identified. However, the overlap between taxonomies and lack of comprehensive specificity in study reporting made coding challenging and detracted from the core theoretical tenets within SDT (i.e., shifted focus to what is delivered from how it is delivered).

**Conclusions:** The specification of SDT-based interventions using standard behaviour change/counselling style taxonomies provides greater clarity of the range of techniques delivered within SDT-based interventions, yet may shift focus from the factors that specifically promote need support. The results of this study may clarify our awareness of what is being delivered but cannot yet help to identify what should be delivered to maximise efficacy.

9:45 - 10:00

## The associations among motivation, health-related behaviours, and the DNA methylation of TNF $\alpha$

R. Steel<sup>1</sup>, B. Hussey<sup>1</sup>, S. Mastana<sup>1</sup>, M. Lindley<sup>1</sup>, I. Taylor<sup>1</sup>

<sup>1</sup>Loughborough University, United Kingdom

**Background:** Epigenetics has been described as one of the most exciting areas of contemporary biology, and a novel area of research has begun to explore whether epigenetic modifications are influenced by psychological processes. The present research explored the associations of health-related motivation and behaviour with the DNA methylation of tumour necrosis factor- $\alpha$  (TNF $\alpha$ ). This proinflammatory cytokine plays a prominent role in the body's response to infection; however inflated levels are associated with several noncommunicable diseases.

**Methods:** Participants (N=88) completed questionnaires examining engagement with health-related behaviour (i.e., lifetime physical activity, diet and smoking) and health-related autonomous motivation. They also provided a capillary blood sample for DNA extraction of CpG sites associated with the expression of TNF $\alpha$ .

**Findings:** Health-related autonomous motivation was positively associated with DNA methylation of TNF $\alpha$  ( $\beta=.19$ ,  $p=.06$ ). Indirect effects were identified in a subsequent step. Specifically, autonomous motivation was associated with fruit consumption ( $\beta=.29$ ,  $p=.004$ ), and negatively associated with smoking ( $\beta=-.22$ ,  $p=.03$ ). Significant relationships did not emerge for other dietary factors. In turn, lifetime physical activity and fruit consumption were positively associated with, and smoking negatively associated with, DNA methylation of TNF $\alpha$  ( $\beta=.19$ ,  $p=.06$ ;  $\beta=.17$ ,  $p=.09$ ;  $\beta=-.21$ ,  $p=.04$  respectively). Direct effects of autonomous motivation on DNA methylation did not persist when these indirect effects were included ( $\beta=.09$ ,  $p=.42$ ).

**Discussion:** Results support the idea that autonomous motivation is associated with adaptive DNA methylation, albeit indirectly. High quality autonomous motivation is suggested to energise some types of healthy behaviour, which is then associated with adaptive DNA methylation.

10:00 - 10:15

## The role of self-regulation in and barriers to self-monitoring of weight

K. Frie<sup>1</sup>, J. Hartmann-Boyce<sup>1</sup>, S. Jebb<sup>1</sup>, C. Pilbeam<sup>1</sup>, P. Aveyard<sup>1</sup>

<sup>1</sup>University of Oxford, United Kingdom

**Background:** Research suggests that regular self-monitoring of weight can enhance weight loss. The effectiveness of self-monitoring is hypothesised to be based on a self-regulation process. This observational study examined the extent to which people naturally self-regulate upon weighing. Additionally, the study examined barriers to using daily weighing for self-regulation.

**Methods:** Twenty-four people, who were overweight, were asked to weigh themselves daily for eight weeks and record their thoughts and feelings during weighing. Upon completion of the study, participants were invited for a debrief interview. Framework and thematic analyses of the 2nd, 4th, and 7th week think-aloud recordings, as well as debrief interviews, were used to identify self-regulation and barriers to daily weighing. Exploratory regression analysis assessed the relationship between self-regulation and weight loss success.

**Findings:** On 89% of occasions participants compared their weight measurement to a set goal, and on 57% they reflected on previous behaviour. Action-planning only occurred on 20% of occasions, and specific action-planning was even rarer (6%). Only specific action-planning significantly predicted weight loss, the coefficient for a 1SD increase in action-planning was -1.4kg, 95% confidence interval -2.8kg to -0.2kg. Some participants felt that weighing motivated weight loss behaviours during the day. Barriers to the interpretation of weight measurements were difficulties with understanding fluctuations, forgetting to weigh, and forgetting previous weight measurements.

**Discussion:** When people weigh themselves, they very rarely complete all the steps of self-regulation, with specific action-planning being particularly uncommon. However, this step may play a key role in promoting weight loss.



10:15 - 10:30

## Daily goal conflict and adherence to dieting goals: An ecological momentary assessment study

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<sup>1</sup>University of Tasmania, Australia

<sup>2</sup>University of Bremen, Germany

**Background:** Reducing discretionary food intake- "snacking"-is an integral part of dieting. However, individuals may experience difficulties in reducing their snacking due to self-regulatory problems arising from conflicts between dieting and other personal goals. Here, we examine the impact of goal conflict on snacking during two weeks of dieting.

**Method:** At baseline, 94 dieters completed an assessment of goals using Little's personal project analysis. Participants identified 7 goals; one of which was pre-defined as adhering to diet. Over the beginning 14 days of their diet, participants recorded their food in real-time using an electronic diary. Every evening, participants reported the goals they had engaged in and which goals conflicted or facilitated with their dieting goal.

**Findings:** Over the study duration, 1251 days of food intake and goal conflict were recorded. Participants consumed an average of 1.4 (SD= 0.8) daily snacks. 72.3% of people experienced at least one day of goal conflict. On 15.7% of days participants experienced at least one conflicting goal with their dieting goal. The number of snacks did not differ between days when conflict with the dieting goal was experienced and days without goal conflict. The likelihood of experiencing conflict with the dieting goal did not change over the study.

**Discussion:** Examining the day-to-day changes in goal conflict is an important step in understanding how individuals prioritise and manage their goals. This study suggests that the impact of goal conflict on dieting may not be via snacking behaviour. Implications for theories that include goal conflict will be discussed.

# Perceptions and experiences of healthcare delivery

9:00 - 10:30

D'Arcy Thomson

Kenneth Ward

9:00 - 9:15

## Effects of multidisciplinary lung cancer care on patients' satisfaction and psychosocial outcomes

K. Ward<sup>1</sup>, W. Chen<sup>1</sup>, M. Smeltzer<sup>1</sup>, M. Meadows<sup>1</sup>, N. Faris<sup>2</sup>, C. Berryman<sup>2</sup>, B. Jackson<sup>2</sup>, F. Rugless<sup>2</sup>, M. Ray<sup>1</sup>, R. Osarogiagbon<sup>2</sup>

<sup>1</sup>University of Memphis, United States

<sup>2</sup>Baptist Memorial Hospital, United States

**Background:** Coordinated multidisciplinary (MD) lung cancer care, with key specialists concurrently providing early input to develop a consensus care plan in collaboration with patients and caregivers, may improve satisfaction with care and quality of life (QOL) compared to the usual serial care (SC) model, but needs rigorous evaluation.

**Methods:** Prospective comparative effectiveness trial enrolled newly-diagnosed patients receiving MD or SC within the same US healthcare system. At baseline, 3 and 6 months, patients completed satisfaction measures from the Consumer Assessment of Healthcare Providers and Systems, the Functional Assessment of Cancer Therapy – Lung (FACT-L) QOL instrument, and Hospital Anxiety and Depression Scale (HADS). Mixed linear models examined group, time, and group by time interactions for satisfaction, and effects of satisfaction on FACT-L and HADS. Associations were adjusted for insurance, race, clinical stage, and performance status.

**Findings:** 456 patients (159 MD, 297 SC) were enrolled (50.6% men, 66.8 yrs). Greater improvement over time occurred for MD than SC patients in satisfaction with treatment plan ( $p=.0036$ ) and quality of care received from the whole team ( $p=.0377$ ). MD was more likely than SC to perceive their care was better than that received by other patients ( $p=.0025$ ). Depression in both groups increased at 3 months ( $p=.0118$ ). Satisfaction with quality of care from the whole team, and with the nursing staff, predicted improvements in QOL, depression, and anxiety in MD but not SC (interaction  $p$ -values  $<.05$ ).

**Discussion:** Coordinated MD lung cancer care improves patient satisfaction, which in turn predicts improvement in QOL, depression, and anxiety.

9:15 - 9:30

## Transitional care following acute coronary syndrome: patients' perceptions and early experiences in two countries

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<sup>4</sup>Monash University, Australia

Following acute coronary syndrome (ACS), it is standard practice for stable patients to be discharged as quickly as possible from the hospital setting. If they do not have adequate support during this transition home, challenges such as readmission can result. The objective of this qualitative study was to explore the perceptions and early experiences of UK and US patients transitioning from hospital back to home following ACS. We conducted semi-structured telephone interviews with patients recently hospitalised for ACS (UK: n = 8; US: n = 9) and analysed the resulting data using the Framework Method. We identified four superordinate themes. Coping, adjustment and management: Patients were still adjusting to the physical limitations caused by their ACS but most had begun to implement positive lifestyle changes. Gaps in care transition: Poor communication and organisation since leaving hospital resulted in delayed follow-up, particularly among UK patients. US patients reported better care coordination which was enhanced through the availability of online health management support. Quality of care from hospital to home: Patients experienced varied inpatient care quality but had generally positive interactions with healthcare providers, including pharmacists, in the community. Medication-taking beliefs and behaviour: Patients reported good adherence which was perceived as necessary for recovery. Side effects were of concern to some patients. Our study found that patients experienced gaps in care transition early on after returning home. Poor communication after discharge caused frustration among patients, particularly from the UK, but did not appear to have a direct negative impact on treatment initiation.

9:30 - 9:45

## Quality of care and childbirth experience in Serbian public healthcare institutions

B. Stankovic<sup>1</sup>, M. Skocajic<sup>1</sup>, A. Djordjevic<sup>1</sup>

<sup>1</sup>Faculty of Philosophy, University of Belgrade, Serbia

**Background:** Previous qualitative studies indicated that certain aspects of care during childbirth in Serbian public hospitals are associated with negative or even traumatic birth experiences. The aim of the present study was to systematically evaluate the prevalence of these problematic aspects of care and to investigate their connection with the quality of birth experience.

**Methods:** The study was conducted by administering a face-to-face survey to a large community sample of women (N=1181) who had vaginal delivery in one of maternity hospitals across Serbia over the last four decades. The questionnaire measured different indicators of organizational and interpersonal aspects of care, as well as different aspects of childbirth experience. Due to non-normal distribution of the data, the analysis relied on nonparametric Kruskal–Wallis test.

**Findings:** Most of the problematic institutional practices (lithotomy position during birth, lack of privacy in the ward, lack of communication and support, lack of informed consent) are widespread, present in between 50% and 70% of the cases. All problematic aspects of care are significantly related to negative birth experiences ( $p < 0.01$ ): lack of control and active involvement in birth; feeling objectified and neglected; feeling overwhelmed and unable to cope with the situation.

**Discussion:** Childbirth care in Serbian public hospitals is standardized and not adapted to the individual needs and preferences of women giving birth, which significantly shapes their birth experience. The study emphasized that managing birth without relying on women's subjective involvement and distant relationship with medical practitioners represent crucial aspects of care related to negative experience of birth.

9:45 - 10:00

## Exploring health care professionals approach to lifestyle management in pregnant women with a BMI $\geq 25$

C. Flannery<sup>1,2</sup>, S. McHugh<sup>2</sup>, L. Kenny<sup>2</sup>, M. O’Riordan<sup>2</sup>, F.M. McAuliffe<sup>3,4</sup>, C. Bradley<sup>2</sup>, P.M. Kearney<sup>2</sup>, M. Byrne<sup>5</sup>

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<sup>2</sup>University College Cork, Ireland

<sup>3</sup>UCD Perinatal Research Centre, School of Medicine, University College Dublin, Ireland

<sup>4</sup>National Maternity Hospital, Dublin, Ireland

<sup>5</sup>NUI Galway, Ireland

**Background:** The aim of this study was to understand the approach taken by midwives, obstetricians and General Practitioners (GPs) who provide antenatal care to pregnant women with a BMI  $\geq 25$  with the view to informing the development of an antenatal lifestyle intervention.

**Method:** Semi-structured interviews were conducted with a purposive sample of healthcare professionals (HCPs) from a large academic maternity hospital in Cork, Ireland and with a sample of GPs working in primary care in the region. Interviews were digitally recorded and transcribed into NVivo V.10. Thematic analysis was used to analyse the data.

**Results:** Seventeen HCPs were interviewed. Analysis of these interviews found weight was still a sensitive conversation topic, resulting in the “softly-softly approach”. HCPs tried to strike a balance between being personal and empathetic towards the women and medicalising the conversation. Where circumstances and scarce resources dominated their approach, HCPs described “doing what you can with what you have”. Most HCPs did not have ‘specific written guidelines’ to follow and were adapting the evidence base in order to deal with large ‘caseloads’. Finally, HCPs shifted their approach putting “emphasis on health rather than weight” when medical issues arose.

**Discussion:** This study demonstrates the complexity of managing weight during pregnancy. The topic of weight needs to be normalised in order to address its sensitive nature. HCPs also require clear evidence-based guidelines for monitoring and managing weight in order to improve care. These findings can assist in the development of antenatal lifestyle and weight management interventions.

10:00 - 10:15

## New cultural competences needed for health teams as a priority in chronic healthcare.

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<sup>2</sup>University of Luxembourg, Research Unit INSIDE, IRSEI, Luxembourg

Technological changes and higher prevalence of chronic diseases require changing patients' and healthcare professionals' position with more participation in healthcare organization, and more implication in their relationships. Based on the Canadian 'patient-as-partner in healthcare' approach, our aims were to identify and categorize cultural values underlying this term in Luxembourg, and to characterize a set of cultural competencies needed for its practical application.

Method: A qualitative study using a semi-directive guide developed within an INTERREG project was conducted among 30 healthcare professionals. A categorical thematic content analysis was realized using N'Vivo software.

Results: For some professionals, the word 'partner' is not appropriate in Luxembourgish, but they defined it as a companion who engages in a mutual cooperation, structured collaboration and sharing of information with a common goal: Quality of healthcare. For others, a 'partner' is an associate who takes part in decision making, discussions, negotiations and evaluations. This partner approach would allow processes of change, bringing autonomy (surveillance, self-education, and monitoring treatment) to the patients, provided that professionals partly cede their traditional power. Trust and respect would be the main start of this process. Difficulties in communication and relationships would arise when helping the patients understand their disease, adhering to instructions, and giving a balanced place to the information found on Internet.

Conclusion: This 'collaborative accompaniment' appears to allow decisional balance, an interdisciplinary method which requires training for all partners (physicians GP or specialists, patients and psychologist) and not only case-managers to help patients acquire self-efficacy for behavioral changes.

# Predictors of Occupational Stress Consequences

9:00 - 10:30

Anderson

Judith Horrigan



9:00 - 9:15

## Is healthcare dyadic fit negatively associated with providers' burnout and intent to leave? Preliminary results

M. Genet<sup>1</sup>, F. LHEUREUX<sup>1</sup>, D. Truchot<sup>1</sup>

<sup>1</sup>University of Bourgogne Franche-Comté, France

**Background:** Referring to the person-environment fit approach to stress, we introduce the concept of healthcare dyadic fit (HDF) – which include three dimensions (supplementary fit, providers' complementary fit to patients and patients' complementary fit to providers) – and hypothesize that the higher the HDF is, the lower providers' burnout and intent to leave are. Additionally we expect that the stressors-burnout association is partly explained by HDF, considered as a mediator.

**Methods:** 240 providers (mainly nurses, physicians, physiotherapists) from French occupational associations voluntarily participated in a cross-sectional survey, mainly measuring burnout (MBI-HSS), occupational stressors (HPSI), intent to leave and perceived HDF, the latter being measured with a newly devised 12-item scale. Confirmatory Factor Analysis (CFA) was used to test its validity. Correlational and multilevel conditional process analyses were used to examine variables associations.

**Findings:** CFA supports the validity of the HDF scale ( $\chi^2/df = 2.76$ , CFI = .94, SRMR = .061, RMSEA = .086). Correlations of HDF with burnout (-.424), stressors (-.392) and intent to leave (-.137) were significant ( $p < .05$ ). HDF had a significant within-effect on burnout ( $b = -.531$ ,  $p < .001$ ) and on intent to leave ( $b = -.468$ ,  $p < .01$ ), while accounting for stressors effects. HDF partly mediated the stressors/burnout association ( $b = .193$ ,  $p < .01$ ).

**Discussion:** The relevance of the HDF approach to examine the role of the perceived patient-provider relationship in the etiology of providers' burnout will be discussed, as well as limitations of this preliminary study (e.g. design) and avenues for future research (e.g. role of providers' preferences).

9:15 - 9:30

## Exploring registered nurses' stress associated with quality of work life factors in Northeastern Ontario, Canada

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<sup>4</sup>Laurentian University, School of Human Kinetics, Canada

<sup>5</sup>University of Minnesota Medical School Duluth, United States

<sup>6</sup>Northern Ontario School of Medicine, Canada

**Background:** The aim of this research was to explore the quality of work life (QOWL) and practice environment factors associated with registered nurses' (RNs) stress working in urban, rural and remote hospitals located in Northeastern Ontario, Canada.

**Methods:** A mixed methods sequential explanatory design was utilized to collect quantitative data from RNs (n=173) and qualitative data from RNs and nurse leaders (n=17). Data analysis included multiple and logistic regressions to determine factors associated with nurses' QOWL and stress scores prior to conducting qualitative thematic analysis.

**Findings:** Supporting Holistic Client Healing and Nurse Healers was the overarching theme that described factors associated with nurses' QOWL and stress, and supported by five additional key themes: 1) Holistic Healing of Clients: Dueling Ideologies, 2) Facilitating Healing at the Bedside: Supporting Nurses' Work Life, 3) Geographical Hindrances to Healing: Healthcare System Inequalities, 4) Supporting Healing Beyond the Hospital Bedside: Healthcare System Inequities in Policies, Funding and Decision-Making Processes, and 5) Nurses' QOWL and Health Consequences.

**Discussion:** Supporting the holistic healing of clients and nurse healers requires changes to inequitable healthcare system policies, and decision-making processes that perpetuate healthcare system inequalities. Nurses require access to essential supports and resources that facilitate the healing processes for patients, and maintain their legal and ethical standards of care that may contribute to stress reduction. It is important for nurses to become involved in policy and political activities to raise awareness of unacceptable working conditions that can impact the health outcomes of patients, nurses and the healthcare system.

9:30 - 9:45

## Beyond stress management behavior: The HAPA framework even predicts stress reactions in Japanese office workers.

Y. Shimizu<sup>1</sup>, A. Dijkstra<sup>2</sup>

<sup>1</sup>International Christian University, Japan

<sup>2</sup>University of Groningen, Netherlands

When stress management behaviors are effective, they should lower stress reactions. However, little evidence is available for this relation from determinant models. The aim of this study was to test the Health Action Process Approach (HAPA) in predicting stress reactions, as caused by stress management behaviors and its determinants.

Japanese office workers (N=1900; male: 975, female 925) answered questions on their stress management behaviours and their stress reactions, and several other variables from the HAPA (e.g., self-efficacy, outcome expectancy, risk perception). Confirmatory factor analyses and reliability analyses were conducted in order to confirm the fit indices of the eight scales. Covariance structure analysis was performed to confirm the acceptability of the hypothetical model.

The results showed that each of the eight scales had the expected structure with acceptable structural validities and reliabilities and that the stress management behaviour model yielded acceptable fit indices. As expected, the stress management behaviour leads to stress reactions, and outcome expectancy and risk perception had a negative relation with stress reaction, mediated by intention, planning and stress management behavior.

The results above indicate that the HAPA does not only predict stress management behaviour, but also the subsequent stress reactions that are the primary cause of stress-related illnesses. This was the first time that stress management behaviour and stress reactions were assessed in a theoretical determinant model in Japan.

9:45 - 10:00

## Is stress of options linked to psychological well-being? An exploratory study among upper level managers

S. Zeike<sup>1</sup>, H. Pfaff<sup>1</sup>

<sup>1</sup>University Hospital Cologne, Germany

**Background:** Work has changed in the last decades. Labour is now more cognitively complex, more collaborative and more time pressured. Organisations are more agile and processes are often unclear, fluent and unpredictable. As a result, managers often have a lot of options available and complex decisions to make. We assume that the increase in options may be perceived as a burden or strain and may influence psychological well-being.

**Methods:** Using a web-based survey, data was collected from a sample of 368 upper level managers from a German IT company. The study was conducted in 2017. Psychological well-being in managers was assessed by using the German version of the WHO Well-Being-Index (WHO-5). Stress of options was measured by a self-developed scale based on the concept of Pfaff (2013). Multiple logistic regression analysis was used to analyse potential prognostic effects on psychological well-being.

**Findings:** The findings show that 21.5 per cent of managers were classified with a poor well-being. Analysis of data revealed a significant relationship between stress of options and psychological well-being ( $P = 0.003$ ;  $OR = 1.24$ ;  $95\% CI = 1.07$  to  $1.43$ ). A lower degree of perceived stress of options is associated with greater well-being.

**Discussion:** The study provides a valuable insight into the relationship of stress of options and well-being. The findings serve as a starting point for further investigations on stress of options and occupational health related outcomes. Managers' stress of options should be considered in occupational health research because of its negative effect on psychological well-being.

10:00 - 10:15

## Psychological and physiological responses of firefighters to a simulated emergency.

K. Andrews<sup>1</sup>, M. Herring<sup>1</sup>, S. Gallagher<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Evidence suggests that the physical and psychological demands of firefighting may decrease cognitive functioning, judgement, and accuracy, and increase state anxiety and stress. Thus, the present study examined the effect of firefighting activities on key psychological and physiological variables.

**Methods:** Male firefighters (n=22, age: 42.8±7.5) performed a novel simulated emergency task (SET) in full turnout gear, including standard breathing apparatus (BA). Participants ascended/descended a tower five times, moved three items to randomly designated floors, recalled stimuli from randomly selected floors, and completed a problem-solving task. A within-subjects design was used; measures of mood, affect, and salivary cortisol were obtained pre- and post-SET. Heart rate and oxygen consumption were monitored continuously. Paired t-tests and standardized mean differences (SMD) quantified outcome change.

**Findings:** Heart rate ( $t_{21}=-15.21$ ,  $p\leq 0.001$ , SMD= 3.98) was significantly increased and Oxygen consumption from the BA ( $t_{21}=27.25$ ,  $p\leq 0.001$ , SMD=-17.03) were significantly increased during the SET. Although statistically non-significant, small-to-moderate reductions were found for vigour (SMD=-0.03), total mood disturbance (SMD=-0.11), positive affect (SMD=-0.14), anger (SMD=-0.27), depression (SMD=-0.33), and positive affect (SMD=-0.14), and small-to-moderate increases were found for state anxiety (SMD=0.09), negative affect (SMD=0.21), confusion (SMD=-0.09), and fatigue (SMD=-0.04). SET duration and intensity may have contributed to the lack of significant outcome changes.

**Discussion:** Findings for positive and negative affect, state anxiety, fatigue and vigour are consistent with previous reports regarding the influence of firefighting on psychological and physiological responses, reinforcing the potential influence of demands faced during an emergency on firefighter performance, safety, and health.

10:15 - 10:30

## Symptoms of job burnout: results from a 10-day diary study among public servants

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<sup>3</sup>Utrecht University, Netherlands

**Background:** Burnout is usually seen as a chronic state of mental exhaustion. Nevertheless, a within-person approach suggests that burnout symptoms may fluctuate from one day to the other. The aim of our study was to examine inter – and intrapersonal variability of daily burnout symptoms and their relation with the pre-assessed burnout level using a multilevel approach.

**Methodology:** An online diary study over a period of 10 consecutive working days was conducted among 238 public servants. Women constituted 75% of the sample, and the average tenure was 15 years. Burnout was measured with the 8-item Oldenburg Burnout Inventory (exhaustion and disengagement).

**Results:** The intra-class correlation coefficients suggest that, although significant between-person variability exists, most of the burnout variance is within-persons. When daily symptoms of burnout were decomposed into fluctuations around the individual mean (state-like) and interpersonal differences (trait-like), correlations between disengagement and exhaustion were .68 and .83, respectively. However, the associations of pre-diary burnout with those trait-like burnout retrieved from the diary data are only medium sized. Namely, for disengagement it was .59, whereas for exhaustion -.50. Finally, for both disengagement and exhaustion, a significant variance in intercepts was observed, meaning that different levels of burnout exist among participants at the beginning of the diary study, whereas slopes were insignificant.

**Conclusion:** Conceptualizing burnout in terms of daily symptoms is promising, even in such a relatively stable work context as that of public servants. The relationship between trait-like and daily burnout may generate new insights into development and dynamics of burnout.

# Individual, social and societal influences on health and well-being

9:00 - 10:30

Kirwan

Carmen Lefevre

9:00 - 9:15

## The relationships of dispositional compassion with psychological well-being and happiness

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**Background:** This study investigated a) the cross-sectional associations of dispositional compassion with indicators of psychological well-being and happiness b) the causal relationships of compassion with psychological well-being and happiness over a 15-year prospective follow-up in adulthood.

**Methods:** The subjects (N=1332–1699) of the Young Finns study completed the Temperament and Character Inventory; the Mood scale of Revised Dimensions of Temperament Survey; the Negative Emotionality scale of the Emotionality, Activity, and Sociability Temperament Survey; the Positive and Negative Affect Schedule; the Multidimensional Scale of Perceived Social Support; the Revised Life Orientation Test; and answered questions about life satisfaction and subjective health. The measurements were conducted in 1997–2012. Statistical analyses included multivariate analyses of covariance and cross-lagged analyses for longitudinal data.

**Findings:** High compassion was related to higher positive affectivity ( $\beta=.22$ ,  $p<.001$ ), lower negative affectivity ( $\beta=-.36$ ,  $p<.001$ ), higher optimism ( $\beta=.31$ ,  $p<.001$ ), higher social support ( $\beta=.19$ ,  $p<.001$ ), higher life satisfaction ( $\beta=.15$ ,  $p<.001$ ), and higher subjective health ( $\beta=.10$ ,  $p<.001$ ). High compassion was also linked with higher scores of Happiness Index ( $\beta=.34$ ,  $p<.001$ ) and Composite Health Index ( $\beta=.20$ ,  $p<.001$ ). Longitudinal analyses revealed that there were predictive paths from high compassion to higher positive affectivity ( $\beta=.08$ ,  $p<.01$ ), lower negative affectivity ( $\beta=-.08$ ,  $p<.01$ ), and higher social support ( $\beta=.09$ ,  $p<.001$ ), but not in the opposite direction. All the results were sustained after controlling for age, gender, and socioeconomic factors.

**Discussion:** Compassion is associated with a wide variety of indicators of affective and non-affective well-being. Compassion is more likely to predict psychological well-being and happiness than vice versa.



9:15 - 9:30

## The impact of weight perceptions in health and well-being: A multiple mediation model

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<sup>1</sup>ISPA: Instituto Universitário, Portugal

<sup>2</sup>FP-UL, Portugal

<sup>3</sup>ISCTE-IUL, Portugal

**Background:** Obesity research is focusing on the mechanisms that underlie the impact of weight on health, wellbeing and eating behavior. In the present research, we studied the mediating role of weight distortion and weight self-criticism in the relationship between weight and health, wellbeing, body satisfaction and emotional eating

**Methods:** We analyzed 806 individuals from a Portuguese national study on nutrition. Two groups were constituted according to whether participants were on a diet or not. A multiple mediation model was estimated using Structural Equation Model (SEM).

**Findings:** The analysis produced a valid model in which weight self-criticism was a partial mediator of the relationship between weight and body satisfaction and a full mediator of the relationship between weight and emotional eating for the non-dieters' group. For the dieters' group, a full mediation of weight self-criticism was observed in the relationships between weight and health, wellbeing and body satisfaction. A suppression effect was found in the weight-emotional eating relationship, meaning that the positive association of emotional eating with weight self-criticism annulled its negative association with actual weight. For weight distortion, no mediation effect was found in both groups of participants.

**Discussion:** The results state the importance of weight perceptions in understanding the impacts of weight, particularly when people have a greater focus on eating. The critical attitude towards weight is more relevant than its misrepresentation. These results provide targets for weight interventions and highlight the need for tailoring in function of dieting behavior.

9:30 - 9:45

## Peer versus Family Support: Effect on the Life Satisfaction of Luxemburgish Adolescents

C. Catunda<sup>1</sup>, A. Heinz<sup>1</sup>, H. Willems<sup>1</sup>

<sup>1</sup>University of Luxembourg, Luxembourg

**Background:** Life satisfaction in youth increases with social support and decreases with age. Adolescence is a period of transition and the amount of time spend with peers increases while with family decreases. This study aims to investigate the mediating effects of family and peer support in the life satisfaction of Luxemburgish adolescents.

**Methods:** The most recent HBSC Luxembourg survey took place in 2014. A total of 7 757 students aged from 11 to 18 years old responded to a questionnaire including the Cantril ladder (1965) to access life satisfaction, the Multidimensional Scale of Perceived Social Support (MSPSS) measuring both peer and family support, as well as socio-demographic questions.

**Findings:** Hierarchical multiple regression analysis indicates the negative effect of age on life satisfaction being partially mediated by family support, but not peer support, despite the strong correlation between both kinds of social support. This is especially true for girls, although their life satisfaction and peer support are lower when compared to boys, the difference regarding family support is not significant.

**Discussion:** Although peer and family support are highly correlated variables, only the latter influences adolescents' life satisfaction, decreasing the impact of age. As adolescence is a period of transition, the opposite results were expected, with peers being more important with age. Keeping a satisfactory relationship with family seems to play an important role in their life satisfaction. More studies should explore both complimentary kinds of social support.

9:45 - 10:00

## Mechanisms of transmission of health and health beliefs across three generations over the life-course

N. Slagboom<sup>1</sup>, M. Crone<sup>1</sup>, R. Reis<sup>1,2</sup>

<sup>1</sup>Leiden University Medical Centre, Netherlands

<sup>2</sup>University of Amsterdam, Netherlands

**Background:** A pilot-study found clustering of joint pain, cardiovascular disease, and diabetes among families of a coastal town in The Netherlands. These health problems or underlying behaviours were often present in all generations. Building on health psychology and medical anthropology, we explored how health problems and beliefs were transmitted across generations in this traditional town.

**Methods:** Adults with joint pain, cardiovascular disease, and/or diabetes and their adolescent children and parents (when possible) participated in semi-structured life-course interviews. Ten families were interviewed (28 interviews). For each member a lifeline was drawn to describe relevant critical and sensitive periods. We zoomed in on the individual and contextual beliefs or circumstances. Data were analysed using a Qualitative Comparative Framework, allowing for cross-case analyses within and between families or generations.

**Findings:** The oldest two generations described health in terms of (family) wellbeing, proximity/availability of family support, being able to work and to live an independent life. The youngest generation more often defined health in terms of drinking, smoking, body weight and physical activity. We could distinguish families with a lower and a higher risk of intergenerational transmission. The last group was characterised by their multiple exposure to stigmatised life-events (e.g. bullying, unemployment) in all generations. There was a low awareness of intergenerational transmission of unhealthy behaviours.

**Discussion:** This study provides a further understanding of the dynamic interaction between local context and health beliefs in families. Findings suggest that a two- to three-generation approach is needed to strengthen health and wellbeing in these families.

10:00 - 10:15

## Understanding societal judgements of health conditions in the United Kingdom and Germany

C. Lefevre<sup>1,2</sup>, R. Webster<sup>1</sup>, G. Lewis<sup>3</sup>

<sup>1</sup>Zava, United Kingdom

<sup>2</sup>University College London, United Kingdom

<sup>3</sup>Royal Holloway, University of London, United Kingdom

**Background:** Many health conditions are judged negatively by society. These judgements can have negative health and psychological consequences for patients who may delay seeking treatment or develop additional mental and/or physical health concerns due to perceived stigma. Understanding what types of health conditions are judged - and what might drive these judgements - is important with regard to changing public perceptions and ultimately improve well-being. Accordingly, here we establish levels of societal judgement for a broad range of health conditions and investigate four theoretically derived drivers of negative judgements towards health conditions.

**Method:** We conducted online surveys in the United Kingdom and Germany assessing levels of negative judgement for 110 common health conditions. Participants also rated the warmth and competence of patients with the condition as well as the degree to which each condition was self-inflicted and whether the condition was innate to a patient.

**Results:** Negative judgement was highest for people with mental health conditions and sexually transmitted infections, with addiction being the most judged in both the UK and Germany. Multiple-regression analysis indicated negative judgement was reduced by perceptions of warmth but increased by perceptions of self-infliction and innateness across both the UK and Germany.

**Conclusion:** Negative societal judgement towards health conditions are predicted by (low) warmth, perceptions of self-infliction and perceptions of innateness. Because these vary in importance between health conditions and countries, a nuanced approach to attenuating judgement is likely required. We discuss potential avenues for attitude change.

# Emotions and adaptation in chronic disease

9:00 - 10:30

Larmor

Jorg Huber

9:00 - 9:15

## Psychosocial resilience contributes to better glycaemic control in people living with type 1 diabetes

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<sup>4</sup>University of Exeter, United Kingdom

**Background:** Previous research in young adults living with type 1 diabetes has shown that psychosocial resilience is associated with lower HbA1c, but it is possible that for type 1 patients this advantage is confounded by higher residual insulin levels in some patients, helping to make glycaemic control easier for this group of patients.

**Methods:** As part of a prospective study (StartRight; n=480), the CD-RISC 10-item resilience questionnaire scale was completed by 141 participants with type 1 diabetes with 2-12 months diabetes duration (mean duration=7.0 (SD 3.3) months; age 36.8 (13.6) years; males 57%). Regression analysis was carried out on those with c-peptide $\geq$ 200pmol/l, a reliable indicator of a patient's residual insulin release.

**Results:** Resilience levels were high in this cohort (M=29.8; SD=7.0); the scale ranges from 0 to 40 (very low to very high resilience). In our regression model which adjusted for c-peptide and age as co-variables, stronger resilience was associated with lower HbA1c values (b=-0.53, p=0.02). The association of c-peptide with lower HbA1c values did not reach significance (b=-0.005, p=0.08), nor did age (b=0.12, p=0.10).

**Conclusions:** Stronger psychosocial resilience which tends to increase weakly with age is associated with better glycaemic control in adults with recently diagnosed type 1 diabetes and c-peptide levels above 200pmol/l. This finding is important in that resilience is linked to glucose control, independently of residual insulin levels, as demonstrated by our adjusted model. Follow-up data will provide further insight into the role of resilience, in relation to progressively reducing c-peptide levels, indicating reducing insulin release.

9:15 - 9:30

## Resilience and positive affect are related to the experience of fatigue in rheumatic disease.

E. Taal<sup>1</sup>, K. Schreurs<sup>2</sup>, L. Guddorf<sup>2</sup>, C. Bode<sup>2</sup>, M. van de Laar<sup>2,3</sup>

<sup>1</sup>University of Twente, Centre for eHealth and Well-being Research, Netherlands

<sup>2</sup>University of Twente, Netherlands

<sup>3</sup>Medisch Spectrum Twente, Netherlands

**Background:** Fatigue is a common symptom in patients with a rheumatic disease. Resilience, the ability to bounce back or recover from stress, has been found to be related to lower fatigue in patients with cancer, traumatic brain injury, cardiac disease and fibromyalgia.

**Objectives:** To study the relationships of resilience and the resilience related factors positive affect, acceptance and engaged living with fatigue in patients with rheumatic diseases.

**Methods:** 57 patients with a rheumatic disease (rheumatoid arthritis, 70%; osteoarthritis, 21%; others, 56%) completed an online questionnaire. Fatigue was assessed with SF-36 vitality scale; pain with a VAS; Resilience with BRS and resilience related factors with PANAS (positive affect), AAQ-II (Acceptance) and ELS (engaged living). Data were analysed with hierarchical multiple regression analyses.

**Findings:** Resilience, positive affect, acceptance and engaged living were multivariate significantly related to fatigue ( $R^2 = .54$ ;  $P \leq .001$ ). Resilience ( $\beta = .29$ ;  $P \leq .05$ ) and positive affect ( $\beta = .39$ ;  $P \leq .01$ ) were significant individual predictors of lower fatigue in multiple regression analysis. Acceptance and engaged living were not significantly related with fatigue in the multivariate model. The relationship between resilience and fatigue was partially mediated by positive affect. When pain was included in the model the relations of resilience ( $\beta = .27$ ;  $P \leq .05$ ) and positive affect ( $\beta = .34$ ;  $P \leq .05$ ) with fatigue remained significant.

**Discussion:** Resilience and positive affect may be predictors of decreased fatigue in rheumatic patients. Further longitudinal studies are needed to examine the causality of these relationships.

9:30 - 9:45

## “It was a relief, to know what I was suffering with”: Patients’ experiences with achalasia.

A. Hollywood<sup>1</sup>, M. Kalantari<sup>1</sup>

<sup>1</sup>University of Reading, United Kingdom

**Background:** Achalasia is a rare motility disorder affecting the oesophagus; characterised by dysphagia and regurgitation. The underlying cause is not known and there is often a long delay before diagnosis. The physical mechanisms of the disorder have been explored to provide patients with treatment options but there is limited insight into how patients cope with achalasia. The aim of this study was to explore patients’ experiences with achalasia; in terms of diagnosis, treatment and self-management.

**Methods:** Fifteen semi-structured telephone interviews were carried out with participants who had been diagnosed with achalasia and recruited through a patient support group. Interviews were transcribed and analysed using thematic analysis.

**Findings:** Participants described a long struggle to get a diagnosis for their achalasia and the uncertainty of treatment options available. An overarching theme of identity emerged, with the diagnosis leading to the relief at being given a label for their symptoms but the paradox of grief at the loss of their old identity as a healthy person. The shift in identity was underpinned by a range of coping strategies; from seeking medical interventions to taking control of the symptom management by adopting changes in their behaviour.

**Discussion:** Coping with a rare chronic condition presents with numerous challenges for the patients and the healthcare professionals providing support. Themes that emerged found reflection in Leventhal’s self-regulatory model which could provide the theoretical underpinnings for future interventions, to provide patients with support to cope with the adjustment to this rare chronic condition.



9:45 - 10:00

## Effects of mindfulness-based cognitive therapy on self-reported psoriasis, anxiety, depression, wellbeing and quality of life.

A. Maddock<sup>1</sup>

<sup>1</sup>School of Psychology, Trinity College Dublin, Ireland

**Introduction:** Psoriasis can have a profound impact on a patient's life, with the prevalence of anxiety, depression, poor wellbeing and quality of life generally found to be high in psoriasis populations. Mindfulness based interventions have been shown to have positive impacts on anxiety, depression, wellbeing and quality of life in various populations.

**Objectives:** The aim of the present study was to investigate the effect of mindfulness-based cognitive therapy (MBCT) on psoriasis symptoms and psychological symptoms associated with psoriasis including anxiety, depression, reduced wellbeing and QoL. The study also aimed to investigate if MBCT significantly impacted the potential mediating variables of acceptance, mindfulness, self-compassion, aversion, non-attachment, attention, rumination and worry.

**Methods:** 101 participants were randomly allocated to a treatment arm (MBCT) or a TAU arm. Participants were measured pre-treatment, post-treatment and after a 3-month follow up period. Data were analysed using intention-to-treat analysis and the ANCOVA method with baseline scores entered as covariates.

**Results:** There was a significant group $\times$ time (pre vs. post) interaction on all variables except QoL, indicating a significant reduction of each variable except QoL over time in the MBCT group, but not in the control group. When baseline variables were controlled for, the participants in the MBCT group achieved small statistically significant changes across all variables post intervention versus the TAU group.

**Conclusions:** The results suggest that MBCT may be a useful adjunct therapy for those suffering from psoriasis and the associated psychological symptoms relating to the condition.

10:00 - 10:15

## Encountering and enacting masculinity in the context of breast cancer: A multi-method qualitative inquiry.

K. Quincey<sup>1</sup>, I. Williamson<sup>1</sup>, D. Wildbur<sup>1</sup>

<sup>1</sup>De Montfort University, United Kingdom

**Background:** Under-acknowledged clinically and socially as a threat to men's health, breast cancer in men remains a critical health issue, with complex ramifications for those affected. Research exploring men's breast cancer experiences is limited; hence, this inquiry asks 'How do men describe breast cancer and their experiences of the illness?'

**Method:** 31 British men with a history of breast cancer participated in a multi-method qualitative inquiry combining semi-structured interviews with participant-authored photographs. Through the medium of verbal-visual accounts, men were asked to explicate the breast cancer experience from their male 'patient-survivor' perspective. Data analysis was informed by Interpretative Phenomenological Analysis.

**Findings:** Three interconnected 'masculinity themes' corresponding to the ways men conceptualise understand and express masculinity through the cancer episode provide a framework for the analysis. From pre-formal diagnosis to receiving the confirmed breast cancer diagnosis and undergoing treatment, the men appear to move back and forth between 'threatened and exposed' and 'protected and asserted' masculinities, before transitioning onto a 'reconsidered and reconfigured' masculinity in the latter stages of treatment, as they advance towards being 'in-recovery'.

**Discussion:** A schematic representation illustrating how and when men transition between these masculinities is presented, demonstrating how men perform and move from one masculinity to the next over the course of the illness, as they 'manage', 'make sense of' and 'live through' breast cancer. We consider how men encounter and enact masculinity across the breast cancer trajectory, how this affects men's adjustment to the diagnosis and life thereafter, and how this knowledge might inform appropriate interventions.

# Health and well-being in the face of disease

9:00 - 10:30

Dillon

Sabrina Cipolletta

9:00 - 9:15

## Longitudinal trajectories of psychological adaptation after the onset of chronic health conditions (Work in progress)

C. Debnar<sup>1,2</sup>, V. Carrard<sup>2,3</sup>, C. Peter<sup>2,4</sup>

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<sup>4</sup>Swiss Paraplegic Research (SPF), Switzerland

**Background:** Throughout a normal lifespan, individuals are exposed to at least one and often multiple adverse life events which might include natural disaster, bereavement, or the onset of a Chronic Health Condition (CHC). Despite the adversity of an event, people react differently and show different psychological adaptation patterns. The present study aims to investigate psychological adaptation following the onset of CHC. Its specific objectives are to identify number and shape of longitudinal psychological adaptation trajectories and to test biopsychosocial factors predicting trajectories.

**Method:** This study will use the Swiss Household Panel dataset and include 361 participants reporting the onset of a non-congenital physical CHC and a control sample of 512 participants. Six measurement time points will be examined (from 1 year before to 4 years after the CHC onset). Latent growth mixture modelling will be used to identify psychological adaptation trajectories based on measurement of life satisfaction, depressive mood, and emotions. Biopsychosocial factors predicting trajectories will then be tested using multinomial logistic regression.

**Expected Results:** We posit that three to five trajectories will be identified including a resilience, recovery, and vulnerability trajectory. We expect that personality, income, social support, spirituality, and CHC severity will predict trajectory membership, but not gender, education, and nationality.

**Current stage of Work:** Data analysis will start in April 2018.

**Discussion:** Investigating trajectories of psychological adaptation and their predictors allows to identify individuals with higher risk of lower well-being following the onset of a CHC. This study will thus provide scientific foundations for targeted interventions.

9:15 - 9:30

## Validation of a quality of life battery for carers of people with Multiple Sclerosis (MSQoL-C)

G. Topcu<sup>1</sup>, H. Buchanan<sup>1</sup>, A. Aubeeluck<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

**Background:** Multiple sclerosis (MS) has a profound impact on the quality of life (QoL) of informal carers of people living with the condition. Consequently, the accurate assessment of carers' QoL is important. Generic measures are unable to identify unique issues encountered in MS caregiving and there are no adequate disease-specific scales available to measure MS carers' QoL. Therefore, this study aimed to develop and validate a unique MS-specific QoL measure for informal carers (MSQoL-C).

**Methods:** The MSQoL-C items were identified as a result of a systematic review and two previous explorative studies with MS carers. Content and face validity were evaluated by a panel of six experts and ten carers. In total, 96 MS carers completed the MSQoL-C and generic QoL measures to assess the reliability and validity of the MSQoL-C. Test re-test reliability was conducted with 12 carers.

**Findings:** Exploratory factor analysis resulted in three domains with eight facets specific to MS carer QoL, representing the domains "Difficulties of MS caregiving" (Cronbach's alpha=0.82), "Satisfaction/Dissatisfaction with life" (Cronbach's alpha=0.93) and "Consequences of MS" (Cronbach's alpha=0.92). The MSQoL-C demonstrated good internal consistency, test re-test reliability and congruent validity, and was free of floor and ceiling effects.

**Discussion:** The MSQoL-C is a multi-dimensional and psychometrically sound battery of scales which incorporates both positive and negative aspects of MS caregiving. The MSQoL-C will be useful in informing health research and clinical practice aiming to improve the QoL of this overlooked population of MS carers.

9:30 - 9:45

## Well-being in autoinflammatory diseases: impact of illness perception, coping strategies and the distribution of dependency

S. Cipolletta<sup>1</sup>, L. Giudici<sup>1</sup>

<sup>1</sup>University of Padova, Italy

**Background:** Systemic autoinflammatory disorders (SAID) are a recently defined group of rare chronic diseases characterized by recurrent episodes of inflammation of specific tissues and fever. The aim of this study was to investigate if the health status, anxiety and depression are linked to coping strategies, illness perception, and the distribution of dependency in SAID.

**Methods:** 31 patients (21 female, aged  $38.4 \pm 12.1$  years) were recruited in an Italian clinic specializing in SAID. The participants completed the SF-36 Health Survey, the State-Trait Anxiety Inventory, the Beck Depression Inventory-II, the New Italian version of the Coping Orientation for Problem Experiences, the Illness Perception Questionnaire-Revised, and the Dependency Grids. Correlations and multiple regression analysis were carried out.

**Findings:** Patients with SAID had a worse health status than the Italian general population and women had higher levels of depression. They perceived their disease as primarily caused by medical factors and tended to rely mainly on themselves. Impaired health was associated with the adoption of avoidance strategies, a strong illness identity, beliefs in the serious consequences of SAID, and a perception of poor control over the disease and its treatment. Better health and less anxiety and depression were associated with a greater sense of personal control with regard to the illness, and a greater number of resources in whom patients could confide for help.

**Discussion:** These results suggest that, in order to improve patients' well-being, therapeutic interventions should also take into account illness beliefs, coping strategies and the distribution of dependency.

9:45 - 10:00

## Relationship between the life-style and long term mortality among middle-aged men

A. Goštautas<sup>1</sup>, A. Tamosiunas<sup>2</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

<sup>2</sup>Lithuanian Health Sciences University, Lithuania

**Background:** Importance of several risk factors was confirmed within Countrywide integrated noncommunicable disease (NCD) intervention program (CINDI) initiated by WHO in early seventies in Lithuania. Methodology and results were widely published up to 1995. A prescreening subset of psychosocial CINDI Kaunas data was re-analyzed to establish the presence of long term influence of life-style (LS) on mortality until 2014.

**Method:** 6000 males aged 40-59 were prescreened in 1976 using questionnaire consisting of 48 health related LS items. The data was re-analyzed in 5 mortality categories among survivors and deceased until 2014. Deaths were coded using ICD-X. Kaplan-Meier survival curves and Cox regression were used for statistical analysis.

**Findings:** Evaluation of self-rated health, dietary habits, physical activity, and smoking were significantly related with mortality from all causes. General mortality revealed relationships with more items of LS ( $p < 0,005$ ), while separate categories of mortality, had fewer and more specific relationships.

**Discussion:** This analysis confirms that life-style items as evaluated at prescreening phase of Kaunas CINDI using self-report questionnaire, had long-term influence on mortality from all causes. These findings substantiate health behavior interventions that could be delivered by health psychologists in a variety of settings to prevent premature death among middle-age men in the future.

10:00 - 10:15

## Postrumatic growth following spinal cord injury: the relationships between cognitive processes, social support and mood.

B. O Ceallaigh<sup>1</sup>, J. Moses<sup>1</sup>

<sup>1</sup>Cardiff University, United Kingdom

**Background:** Spinal cord injury (SCI) is associated with a host of deleterious mental health outcomes, including elevated levels of depression, anxiety and PTSD symptomatology. However, a growing body of literature suggests that SCI individuals may also experience lasting positive psychological changes, termed posttraumatic growth (PTG). Previous research has suggested that disruption to core beliefs, social support and deliberate, but not intrusive, rumination are associated with PTG. Additionally, appraisal of disability has been shown to be a significant predictor of psychological adaptation to SCI. The relationship between well-being, mood and PTG is complex, with research suggesting that growth is associated with well-being, but also that PTG and distress can co-exist. To date, these variables have not been investigated in relation to the experience of PTG following SCI.

**Method:** This study employed a cross-sectional survey design. 38 individuals who had acquired a spinal cord injury before the age of 18 were recruited through social media and SCI-specific charities. Participants completed an online battery of questionnaires. Data was analysed using stepwise regression.

**Findings:** Deliberate rumination, social support and positive appraisal of disability emerged as significant predictors of PTG. The relationship between core belief disruption and PTG was non-significant. PTG was associated with lower levels of depression and increased well-being, though it was not possible to infer the direction of causality. The implications findings are discussed in relation to theories of PTG and their relevance to psychosocial adaptation to SCI.



# Chronic illness during childhood: Experiences of children & their families

9:00 - 10:30

Room 201

Siobhan O'Higgins

9:00 - 9:15

## Exploring the measurement of fatigue in adolescents with HIV in South Africa

B. Coetzee<sup>1</sup>, M. Loades<sup>2</sup>, S. Du Toit<sup>1</sup>, R. Read<sup>2</sup>, A. Kagee<sup>1</sup>

<sup>1</sup>Stellenbosch University, South Africa

<sup>2</sup>University of Bath, United Kingdom

**Background:** Fatigue is a well-known and disabling symptom among persons living with HIV, and evidence suggests that HIV-infected adolescents experience elevated levels of fatigue. Yet, fatigue has not been measured amongst this group. As a primary aim, we explored the psychometric properties of the 11-item Chalder Fatigue Questionnaire (CFQ) among HIV-infected adolescents in the Western Cape, South Africa. A secondary aim was to determine the prevalence of fatigue using the Likert scoring method of the CFQ.

**Methods:** We recruited 134 consecutive clinic attending adolescents (11-18 years old) from two primary health care facilities from October 2016 to August 2017. We used principal components exploratory factor analysis (PCA) to explore the psychometric properties of the scale and determined reliability of the scale using Cronbach's alpha ( $\alpha$ ). A cut-off score of  $\geq 18$  on the CFQ was used to determine clinically significant fatigue.

**Findings:** The CFQ demonstrated good internal consistency with a Cronbach's alpha of 0.84. A two factor solution was retained that accounted for 54.23% of the variance in scores. The first factor, 'Physical fatigue', represented the first eight items on the scale. The second factor 'Mental fatigue' represented items nine and ten. About a quarter (24.63%) of adolescents reported substantial fatigue, with a mean overall score of 14.89 (SD = 3.83).

**Discussion:** The CFQ is a short, easy-to-use and cost-effective measure of fatigue that demonstrates good psychometric properties amongst HIV-infected adolescents in South Africa. Future research should determine test-retest reliability of the measure in order to show stability over time.

9:15 - 9:30

## Do individuals with and without chronically ill and/or disabled siblings differ in empathy and personality?

M. Jagla<sup>1</sup>, G.H. Franke<sup>1</sup>

<sup>1</sup>University of Applied Sciences Magdeburg and Stendal, Germany

**Background:** Growing up with a chronically ill and/ or handicapped sibling represents a special life situation, which can affect one's own quality of life and stress management, as well as personality development. Aim of the study is to investigate whether these circumstances have effects on personality traits, especially on empathy, in adult life.

**Methods:** In total 558 people (28 years  $\pm$ 10, 80.3% female) were examined by using a 25-item version of the Neo-FFI to assess the Big Five and the SPF-IRI to assess empathy, which consists of 16 items and the scales fantasy-, emotional concern-, perspective taking-, personal distress.

**Results:** The sample included 233 affected (32 years  $\pm$ 11, 89% female) and 325 non-affected (26 years  $\pm$ 8, 80% female) siblings with statistically significant differences in terms of age and sex. Significant differences between the two groups were found in NEO-FFI ( $F=12.09$ ,  $p\leq.0001$ ,  $\eta^2=.008$ ) and SPF-IRI ( $F=6.33$ ,  $p\leq.0001$ ,  $\eta^2=.006$ ). Affected siblings reported higher values in neuroticism and lower in extraversion and conscientiousness as well as higher emotional concern and higher personal distress than non-affected siblings.

**Conclusion:** Results show that growing up with a chronically ill and/or disabled sibling can have a significant effect on one's personality, especially on empathy. Affected siblings described higher values with regard to actual comprehension and sympathy of emotions of a counterpart as well as with respect to mostly negative emotional states in emotionally strained situations. Support through meetings (in context of primary prevention) and online forums should be offered.

9:30 - 9:45

## Children and young people's experiences of self-management of type 1 diabetes: A qualitative meta-synthesis

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<sup>5</sup>University of Leeds, United Kingdom

**Background:** Type 1 diabetes (T1D) requires commitment to undertake complex self-management tasks. In late childhood and adolescence, young people begin to assume self-management responsibilities for T1D. However, during adolescence metabolic control often declines and T1D-related conflict with parents can increase. The aim of this review was to conduct a meta-synthesis of qualitative studies exploring children and young people's (CYP's) experiences of T1D self-management.

**Methods:** Six databases (PubMed, Medline via Ovid, EMBASE, CINAHL, PsycINFO and Web of Science) were systematically searched. Studies with qualitative findings relevant to self-management of T1D in CYP (aged 8-18 years) were included. A thematic synthesis approach was used to combine the studies and identify analytical themes.

**Findings:** Thirty-six articles met the inclusion criteria. Two analytic themes important to CYP experiences of self-management of T1D were identified: (1) motivation towards independence, which relates to the journey that occurs towards independence in self-management of T1D and (2) feeling in control, which relates to ability and confidence to engage with self-management of T1D.

**Discussion:** The synthesis findings provide insight into the context and factors which underpin how CYP gain independence in self-management of T1D. The synthesis contributes knowledge on what facilitates or impedes transition towards autonomous self-management for CYP living with T1D. Awareness of these influences may lead to the development of informed supports for CYP living with T1D which in turn may lead to improvements in medical and psychosocial outcomes.

9:45 - 10:00

## Perfectionism in youth living with inflammatory bowel disease

S. Ahola Kohut<sup>1,2</sup>, A. Jelen<sup>1</sup>, P. Church<sup>1,2</sup>, T. Walters<sup>1,2</sup>, K. Frost<sup>1</sup>, J. Stinson<sup>2,3</sup>

<sup>1</sup>Hospital for Sick Children, Canada

<sup>2</sup>University of Toronto, Canada

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**Background:** Perfectionism can be separated into two main types: self-oriented perfectionism (SOP: pursuing personal standards of perfection) and socially-prescribed perfectionism (SPP: belief that others demand perfection). Perfectionism has shown to negatively impact quality of life (QOL) in healthy children. However, less is known about the impact of perfectionism in children living with Inflammatory Bowel Disease (IBD). The aims of this study were to explore the impact of perfectionism on the QOL of youth with IBD.

**Methods:** A cross-sectional questionnaire study of perfectionism in a pediatric IBD sample recruited from a tertiary pediatric hospital was completed. Adolescents with IBD completed measures of disease characteristics, perfectionism (Child and Adolescent Perfectionism Scale), and QOL (IMPACT-III).

**Findings:** Adolescents in this sample reported primarily low to mild IBD disease activity (n = 87, age 15.06±1.53 years). 54% of participants were female, 60% diagnosed with Crohn's Disease, and 37% with Ulcerative Colitis. Rates of elevated perfectionism were high; 26.7% with elevated SOP and 18% with elevated SPP (compared to the expected 15.9% in adolescent population). Perfectionism did not significantly predict overall QOL. However, controlling for disease activity and age, socially prescribed perfectionism was a significant unique predictor of a child's emotional state relative to IBD ( $\beta = -0.76$ ,  $t(72) = -1.94$ ,  $p = 0.05$ ), such that increased levels of perfectionism predicted lower emotional well-being.

**Discussion:** Perfectionism, particularly socially-prescribed perfectionism, may negatively impact youth living with IBD. Clinically, this finding highlights the importance of assessing the perceived pressures to perform that youth with IBD experience from others.

10:00 - 10:15

## The impact of adolescents' type 1 diabetes self-management on parent well-being

C. Rawdon<sup>1</sup>, V. Lambert<sup>1</sup>, P. Gallagher<sup>1</sup>, M. Glacken<sup>2</sup>, N. Murphy<sup>3,4</sup>, V. Swallow<sup>5</sup>

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<sup>4</sup>Mater Misericordiae University Hospital, Ireland

<sup>5</sup>University of Leeds, United Kingdom

**Introduction:** Treatment of type 1 diabetes (T1D) is onerous and requires commitment from parents and adolescents to undertake complex multi-component self-management tasks to maintain optimal glycaemic control. Adolescence is a key time in which young people take on responsibility for their T1D self-management. This study aimed to describe parents' experiences of negotiating self-management responsibilities with adolescents with T1D; including the impact of this process on parent health and well-being.

**Methods:** Qualitative interviews were conducted with 32 parents (24 mothers, 8 fathers) of adolescents (11-17 years) living with T1D. Parents were recruited through two national child and adolescent diabetes and endocrine clinics and online advertisement through a national diabetes advocacy organisation. Interview data were transcribed verbatim and thematically analysed.

**Findings:** Parents assumed a number of roles in their child's T1D self-management including taking full responsibility for management, supporting, assisting, and teaching their child. Playing an active role in their child's T1D self-management often had an impact on parent well-being and restricted parents' activities. Parents identified a number of sources of support and areas where they felt additional support may help to facilitate the transition of self-management responsibilities from parent-led to adolescent-led.

**Discussion:** These findings provide healthcare professionals (HCPs) with insight into the challenges parents face when negotiating self-management responsibilities for T1D with their adolescent children and the impact that having an adolescent with T1D may have on parent well-being. Understanding the needs of parents may help HCPs to provide more effective supports to families affected by T1D.

10:15 - 10:30

## Communication between parents and grandparents with Chronic Kidney Disease and their children/grandchildren

H. Buchanan<sup>1</sup>, E. Coyne<sup>2</sup>, L. Condon<sup>1</sup>, C. Sanderson<sup>3</sup>, L. Fergie<sup>1</sup>

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<sup>3</sup>Sheffield Hallam University, United Kingdom

**Background:** We aimed to explore (1) challenges in communicating with children about Chronic Kidney Disease (CKD) and (2) what types of resources would be helpful for parents/grandparents talking to their child/grandchild about CKD.

**Methods:** To gain an in-depth understanding of key issues we took a qualitative approach. We developed a semi-structured interview schedule, informed by patients and research. Resources were presented during interviews to facilitate discussion and to identify preferred resource formats and modes. Nine participants (two male, seven female; 6 parents with CKD and 3 grandparents) were interviewed at one hospital Trust in England. Interviews were audio-recorded, transcribed and analysed using thematic analysis (Braun & Clarke, 2006).

**Findings:** Three main themes were identified: 'Dealing with Difficult Conversations' highlighted that participants felt they needed a 'way in' to introduce difficult subjects to children such as severity of their condition. They felt that CKD-specific storybooks for younger children would help facilitate those conversations. For older children an 'app' was considered most relevant and useful. 'Age-appropriate Disclosure' reflected the desire for parents and grandparents to choose how much information the child could access through the materials. 'Following the Whole CKD Journey' highlighted that the storybooks and the apps should follow on from aetiology to prognosis, and also include daily living with CKD.

**Discussion:** Age-appropriate CKD-specific support materials are an important resource need for parents and grandparents to help start, and facilitate, discussions with their children and grandchildren throughout the individual CKD journey.

# Interventions for Pulmonary Diseases across adolescents and adults

9:00 - 10:30

McMunn

Kim L Lavoie



9:00 - 9:15

## Impact of behavior change targeting physical activity on psychological and cognitive outcomes in COPD patients

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<sup>6</sup>University of Laval, Canada

**Background:** The PHYSACTO® Trial has demonstrated improvements in daily physical activity (PA) and PA-related symptoms in COPD patients (pts) receiving bronchodilators (BDs) ± exercise training (ExT) added to a behaviour change program (BC). This study explored the impact of these interventions on psychological and cognitive outcomes, and the extent to which improvements are associated with increases in PA.

**Methods:** A 12-week (wk), randomised, partially double-blind, placebo-controlled, parallel-group trial (NCT02085161) of BDs ± ExT (tiotropium [T] 5 µg; T + olodaterol [O] 5/5 µg; T+O 5/5 µg + ExT), all with BC, was conducted in 304 COPD pts. Psychological outcomes included changes in levels of depression and anxiety (Hospital Anxiety and Depression Scale, HADS; Patient Health Questionnaire-9, PHQ-9) and cognitive function (Montreal Cognitive Assessment, MoCA) adjusting for age, sex, BMI, smoking, FEV1, and treatment group.

**Results:** Anxiety (HADS-A -1.1), depression (HADS-D -.7, PHQ-9 -1.3) and cognitive function (MoCA +1.8) showed statistically ( $p < 0.001$ ) and clinically significant improvements after 12 wks. For HADS-A, greater improvements were seen in pts with greater increases in walking intensity ( $p < 0.05$ ); for HADS-D and PHQ-9, greater improvements were seen in pts with greater steps, walking duration and intensity (HADS-D,  $p < 0.001$ ; PHQ-9,  $p < 0.05$ ).

**Conclusions:** In moderate-severe COPD, BD ± ExT with BC are associated with improvements in psychological and cognitive symptoms; greater improvements in depression and anxiety are associated with greater increases in PA variables. Interventions that increase daily PA may improve both physical and psychological/cognitive function in COPD pts.

9:15 - 9:30

## Qualitative feasibility and acceptability assessment of a technology-supported pediatric asthma management intervention.

L. Hynes<sup>1</sup>, K. Durkin<sup>1</sup>, D. Williford<sup>1</sup>, T. Ewell<sup>1</sup>, G. Harrah<sup>1</sup>, D. Noel<sup>1</sup>, D. Skoner<sup>2</sup>, C. Lilly<sup>1</sup>, V. Kothari<sup>2</sup>, C. Duncan<sup>1</sup>

<sup>1</sup>West Virginia University, United States

<sup>2</sup>WVU Medicine, United States

**Background:** The Take Action for Asthma Control (TAAC) Study uses mixed methods to assess feasibility, acceptability and potential efficacy of pictorial Asthma Action Plans (AAPs) compared to written AAPs, for improving asthma outcomes. Software was developed for providers to generate personalised PAAPs. In a pilot RCT, 50 youths (ages 8-17) are randomised to receive a written or pictorial AAP, and complete 4 appointments over 6 months.

**Methods:** Feasibility and acceptability data were collected through structured and semi-structured qualitative interviews. Satisfaction with AAPs was assessed through structured interviews with participants and parents after 1- and 6-months. Providers, participants and parents gave feedback on involvement in the study, and on the intervention during semi-structured interviews. Thematic analysis was used to analyse data. A panel of 10 providers took part in a Think Aloud study to facilitate PAAP software modification.

**Findings:** Providers identified modifications that would increase the usability and efficiency of the software. Non-attendance at clinic appointments was a barrier to recruitment but participant retention was excellent. PAAPs were described as clear and appealing, improved knowledge and provided support for managing distressing asthma symptoms. PAAPs facilitated families to communicate and acted as a prompt for self-management. Supplementary information may be beneficial.

**Discussion:** Findings highlight strengths of the PAAP intervention and procedures, and inform opportunities for optimisation before the definitive trial phase of this research. The qualitative data provide insights into the possible mechanism by which AAPs influence adherence to asthma treatment, and the challenges faced by providers related to utilising AAPs.

9:30 - 9:45

## What are the effective aspects of adherence interventions for inhaled corticosteroids in children with asthma?

C.J. Pearce<sup>1</sup>, A. Chan<sup>1</sup>, T. Jackson<sup>1</sup>, L. Fleming<sup>2,3</sup>, A. Bush<sup>1,3</sup>, R. Horne<sup>1</sup>

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<sup>2</sup>Imperial College London, United Kingdom

<sup>3</sup>The Royal Brompton & Harefield NHS Foundation Trust, United Kingdom

**Background:** Although asthma is often manageable by preventer medicines, such as inhaled corticosteroids (ICS), child asthma deaths occur regularly. Low adherence to ICS contributes to poor control, severe exacerbations and hospitalisations in patients with asthma. This systematic review aimed to:

1. Synthesise the literature on interventions in children with asthma
2. Determine which behaviour change techniques (BCTs) were used in effective interventions
3. Evaluate how well the interventions fitted with the Perceptions and Practicalities Approach (PAPA) to intervention design, recommended by the NICE guidelines

**Methods:** Key databases were searched including: PubMed, PsychINFO and Web of Science for randomised control trial interventions in children with asthma which measured adherence, either objectively or subjectively, to ICS. A narrative review was conducted due to high heterogeneity in the studies located.

**Findings:** Of 170 papers found, 18 were eligible and included in the review. Interventions reported in 10 studies were effective in improving adherence and nine studies mapped fully with the PAPA. The BCTs used in effective interventions were: Pharmacological support as part of a complex intervention; Feedback and monitoring; Association-prompts; Natural consequences; Instruction on how to perform a behaviour; Goal setting and action planning, and Rewards when tailored to the patient.

**Discussion:** This systematic review showed that interventions to influence adherence to ICS in children with asthma were more successful when tailored to address both perceptual and practicalities factors, and when using BCTs such as feedback and monitoring, association-prompts, and rewards. Future interventions could apply the PAPA and BCTs to increase their effectiveness.

9:45 - 10:00

## EVALUATION of physiotherapy breathing retraining for asthma; quantitative process analysis of the BREATHE trial

E. Arden-Close<sup>1</sup>, S. Kirby<sup>2</sup>, L. Yardley<sup>2,3</sup>, A. Bruton<sup>2</sup>, M. Thomas<sup>2</sup>

<sup>1</sup>Bournemouth University, United Kingdom

<sup>2</sup>University of Southampton, United Kingdom

<sup>3</sup>University of Bristol, United Kingdom

**Background:** Poor symptom control and impaired quality of life are common in asthma. A recent randomized controlled trial (RCT) of physiotherapy breathing retraining (BREATHE) found delivery by DVD and booklet (DVDB) was equivalent to face-to-face sessions and booklet (F2FB), and superior to usual care, in terms of impact on quality of life. This quantitative process analysis aimed to determine whether groups differed regarding expectancy, experience and treatment engagement, and whether these factors were associated with amount of practice and asthma-related quality of life (QoL).

**Methods:** Quantitative process analysis of the intervention arms of an RCT. Participants were patients with asthma (DVDB n = 261; F2FB n = 132).

**Method:** Questionnaires covered expectancy regarding breathing retraining (baseline), experiences, amount of practice, and perceived barriers (3 months), continued use of treatment (6 and 12 months follow-up), and Asthma Quality of Life Questionnaire (AQLQ) (3, 6 and 12 months).

**Findings:** Almost all participants engaged with breathing retraining, suggesting it will likely be valued for asthma self-management. Although the F2FB arm group enjoyed the techniques more, and reported practising more, this was not associated with greater improvements in QoL. Across multiple analyses, amount of practice was not related to improvement. In the DVDB arm, those who reported greater confidence in their ability to carry out the breathing exercises engaged more.

**Discussion:** Physiotherapy breathing retraining is likely to be valued for asthma self-management. Informing patients that using the DVD and booklet has shown equivalent benefits to face-to-face sessions may increase confidence for home implementation.

10:00 - 10:15

## Participant retention and fidelity assessment informing intervention refinement: Pilot phase of the TANDEM study

L. Steed<sup>1</sup>, V. Wileman<sup>2</sup>, S. Saqi-Waseem<sup>3</sup>, R. Sohanpal<sup>4</sup>, M. Kelly<sup>4</sup>, H. Pinnock<sup>5</sup>, S. Taylor<sup>4</sup>

<sup>1</sup>QMUL, United Kingdom

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<sup>5</sup>University of Edinburgh, United Kingdom

**Background:** Pulmonary Rehabilitation (PR) is a proven exercise therapy for Chronic Obstructive Pulmonary Disease (COPD). Benefits are limited however by poor uptake and retention, often due to depression or anxiety. The TANDEM intervention targets this by using a tailored cognitive behavioural approach (CBA) delivered to patients over 6-8 sessions by trained respiratory health care professionals (rHCPs) preceding PR. The aim of the pilot study was to evaluate TANDEM for acceptability and feasibility and inform intervention refinement and trial processes prior to the full trial.

**Methods:** rHCPs underwent 3 days training to deliver TANDEM to 23 individuals with moderate to very severe COPD and mild to moderate anxiety and/or depression in a pilot randomized controlled trial. rHCPs competence was assessed at post training using the Cognitive First Aid Rating Scale (CFARS). To assess fidelity audio-recordings of each trained rHCP were coded using the CFARS and a study adherence scale.

**Findings:** Eight of nine trained rHCPs were deemed competent post training. Three facilitators withdrew prior to intervention delivery due to maternity leave or work commitments and three during the delivery phase due to personal reasons. Mean therapeutic competency for facilitators was 43/60 on the CFARS and adherence was >95%. Adherence was lower to CBA strategies than formulation or self-management. Patient retention was 87%.

**Discussion:** TANDEM is feasible and acceptable and can be delivered with good fidelity, though attrition of facilitators was higher than anticipated. For the main trial the intervention has been refined and includes ongoing access to support of CBA skills.

10:15 - 10:30

## Patient's perspective on COPD-related fatigue: Impact on daily life and perceived treatment opportunities

M. Kouijzer<sup>1</sup>, M. Brusse-Keizer<sup>2</sup>, C. Bode<sup>1</sup>

<sup>1</sup>University of Twente, Netherlands

<sup>2</sup>Medisch Spectrum Twente, Netherlands

**Background:** Fatigue is a highly prevalent, challenging and understudied symptom of COPD, which influences the quality of life of patients.

**Aims and objectives:** This study addresses the patient's perspective on the impact of fatigue on their daily lives and explores possible treatment options to tackle the burden of fatigue.

**Methods:** Twenty semi-structured interviews were conducted with ten patients hospitalized for a COPD exacerbation and ten outpatients with COPD. Data were transcribed verbatim and coded in an iterative (deductive and inductive) coding process.

**Results:** Patients perceived severe negative impact of fatigue on their daily lives and emphasized that they were limited in physical, emotional, cognitive and social functioning. These limitations caused a high mental burden which challenges patients coping resources and making fatigue a symptom difficult to accept. The majority of patients mentioned that they had, in some degree, lost the joy in life or in some cases, even lost the will to live. Patients reported the need for effective treatment and recommended a multidisciplinary approach and blended care, in which an online treatment to improve fatigue management is combined with face-to-face contact with a healthcare professional that increases social support.

**Conclusions:** These findings indicate that patients perceive the impact of fatigue on their daily lives to be a key factor in decreasing their quality of life. To increase awareness in healthcare professionals and patients and to facilitate early fatigue self-management, a proactive approach by healthcare professionals might be the best way to realize effective tailored treatment.

# STATE OF THE ART: Methodological Advances

11:00 - 12:30

O'Flaherty

Gjalt-Jorn Ygram Peters

11:00 - 11:45

## **‘Looking beyond delivery’: Toward more scientific and multidimensional assessments of intervention fidelity of behaviour change interventions.**

### **State of the Art**

F. Lorencato<sup>1</sup>, N. Hankonen<sup>2</sup>

<sup>1</sup>University College London, United Kingdom

<sup>2</sup>University of Helsinki, Finland

Intervention evaluations typically consist of randomised trials assessing whether interventions ‘work.’ However, effect estimates alone do not provide knowledge regarding ‘how’ or ‘why’ interventions succeed or fail; which is vital to interpreting trial outcomes and informing intervention replication, optimisation and implementation. Assessing intervention fidelity (i.e. ‘extent to which interventions are implemented as designed/intended’) is particularly important for behavior change interventions, whose often complex nature increases susceptibility to variable implementation.

This presentation aims to provide a synthesis and critique of intervention fidelity in behavior change research to date. We will first provide a brief overview of existing theoretical frameworks and guidance for addressing fidelity. These agree fidelity concerns more than ‘was it delivered or not’ and is a multidimensional concept relevant across the intervention designer, provider and recipient spectrum. Yet, the state of the art in behaviour change research suggests fidelity is not being investigated in this manner. We will discuss recent reviews of fidelity assessments for behavioural interventions, highlighting heterogeneity and limitations in the scope and methodological quality of existing approaches.

To address calls for more rigorous fidelity assessment, we will present recent empirical examples of how behavioural science frameworks (e.g. BCT taxonomies) have been applied to systematically examine fidelity of provider training, delivery and recipient intervention enactment; drawing on examples from various contexts, including behavior change targeted at clinicians (e.g. smoking cessation, blood transfusion practice), patients (e.g. physical activity/diet in diabetes), and in educational settings (e.g. school-based physical activity).

However, to progress the science of fidelity and realize the potential for fidelity data to inform inferences from behavioural trials, numerous challenges remain to be addressed (e.g. need for standardized terminology/methodologies, strict fidelity vs adaptation, fidelity enhancement vs monitoring). We will conclude with a reflection of these issues and recommendations for advancing fidelity practice in behaviour change research.



11:45 - 12:00

## Published where and when: evaluation of reporting quality of smoking cessation interventions and comparators

N. Javornik<sup>1</sup>, N. Black<sup>1</sup>, D. Powell<sup>1</sup>, A.J. Williams<sup>1,2</sup>, M. Johnston<sup>1</sup>, S. Michie<sup>3</sup>, J. Hartmann-Boyce<sup>4</sup>, R. West<sup>3</sup>, W. Viechtbauer<sup>5</sup>, M. de Bruin<sup>1</sup>

<sup>1</sup>University of Aberdeen, United Kingdom

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<sup>5</sup>Maastricht University, Netherlands

**Background:** Comprehensive reporting of interventions and comparator groups in behavioural trials is important for replicability and generalisability of Findings: Guidelines and tools, e.g. CONSORT and Behaviour Change Techniques (BCTs) taxonomies, have been developed to enhance reporting. This study explores whether the reporting quality of intervention and comparator groups has improved over time, particularly after the CONSORT Statement and BCT taxonomy were published (2008-2009), and whether the reporting quality is comparable in behavioural and medical journals.

**Methods:** As part of a systematic review of smoking cessation trials (published 1996-2016), authors were requested to provide information on intervention and comparator group support. Intervention and comparator groups for which additional information was provided (k=212) had publicly-available and privately-held materials examined for the presence of BCTs by two independent coders. The proportion of publicly-reported BCTs (over total BCTs) served as the dependent variable in regression analyses.

**Results:** Reporting improved over time ( $B=0.02$ ,  $p<.001$ ) and was overall poorer in medical journals ( $B=-0.10$ ,  $p=.047$ ). After 2009, the proportion of publicly-reported BCTs decreased in medical ( $B=-0.36$ ,  $p<.001$ ), but increased in behavioural journals (Journal\*pre-post-CONSORT interaction ( $B=0.21$ ,  $p=.003$ )), with the model being significant ( $R^2=.12$ ). A sensitivity analysis where intervention and control groups from the same trial were collapsed (k=98) found similar, albeit non-significant patterns.

**Discussion:** Reporting improves over time, with publication of the CONSORT statements and BCT taxonomies seemingly preceding an accelerated improvement, but only in behavioural journals, with medical journals' reporting quality decreasing after 2009. As the analyses were exploratory, they warrant replication in other domains.

12:00 - 12:15

## Using Confidence Interval-Based Estimation of Relevance (CIBER) to Select Social-Cognitive Determinants for Behavior Change Interventions

G.Y. Peters<sup>1,2</sup>, R. Crutzen<sup>2</sup>

<sup>1</sup>Open University of the Netherlands, Netherlands

<sup>2</sup>Maastricht University, Netherlands

**Background:** To be effective, interventions must target important determinants of behavior, so determinant selection is a crucial step in intervention development. Therefore, many determinant studies are conducted where the relative importance of theoretically derived behavioral determinants and their sub-determinants (e.g. beliefs) is mapped for different behaviors and populations. However, to arrive at actual determinant selection on the basis of the rich data collected in such studies is no straightforward affair. This requires simultaneous evaluation of both univariate distributions and associations for many different variables, where judgments should be based on confidence intervals instead of point estimates. We introduce a novel approach to address this challenge.

**Methods:** This approach (CIBER) is based on visualization of confidence intervals for the means and correlation coefficients for all determinants simultaneously. CIBER is provided in open source R package 'userfriendlyscience', and created to be usable by researchers with no experience in R.

**Results:** We illustrate CIBER using data on the determinants of using a high dose of 3,4-methylenedioxymethamphetamine (or ecstasy). Previous experience with using a high dose and expected euphoria (positively) and regret and worry (negatively) were attitude's strongest predictors. Univariate analyses showed strong risk perceptions (awareness of high doses being unhealthy) and the expectation that higher doses cause more hallucinations.

**Discussion:** Determinant selection requires simultaneous comparison of many confidence intervals, but these analyses can yield prohibitively many data points. CIBER efficiently presents those data points, enabling their evaluation and ultimately, well-informed selection of the determinants to target with behavior change methods (or techniques, BCTs).

12:15 - 12:30

## Development of an observation tool for measuring physical activity and wellbeing in urban spaces: MOHAWk

J. Benton<sup>1</sup>, J. Anderson<sup>1</sup>, M. Pulis<sup>1</sup>, S. Cotterill<sup>1</sup>, R. Hunter<sup>2</sup>, D. French<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>Queen's University Belfast, United Kingdom

**Background:** Systematic observation of behaviour offers an objective method of measuring physical activity and other indicators of wellbeing. However, existing observation tools (e.g. SOPARC) are: (a) only suitable for assessing physical activity (and not other aspects of wellbeing); (b) only suitable in large outdoor environments that attract high numbers of users (e.g. regional parks); and (c) have not been validated outside the US.

**Method:** We developed MOHAWk (Method for Observing pHysical Activity and Wellbeing): an observation tool for assessing three levels of physical activity intensity (sedentary, walking and vigorous) and two other evidence-based behavioural indicators of wellbeing (connecting with others and taking notice of the environment). Six observers have used MOHAWk to conduct observations in four sites in Manchester (a park, an urban square and two tree-lined streets) and one site in Belfast (an urban square) across four studies (200 hours of data).

**Findings:** High inter-rater reliability has been established between pairs of observers (ICCs > 0.8). There is preliminary evidence of criterion-related validity, with observed behaviours being patterned in line with hypotheses (e.g. more people taking notice in environments rated as having higher-quality green space). Observing four hours a day, two days a week was found to provide reliable estimates of counts of people and their activity.

**Discussion:** MOHAWk is a reliable and feasible observation tool for measuring physical activity and wellbeing in urban spaces, which overcomes issues of response rates and subjectivity associated with self-reported measures. We are now using MOHAWk in two natural experimental studies in Manchester.

# Dementia – older adult and caregiver perspectives

11:00 - 12:30

D'Arcy Thomson

Alison Wearden

11:00 - 11:15

## Relationship between significant other distress and patient psychological symptoms in persons recently diagnosed with dementia.

R. Safavi<sup>1</sup>, A. Wearden<sup>1</sup>, K. Berry<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

**Background:** Relatives of people with dementia experience high levels of burden and distress, which may manifest itself in the form of criticism. These factors may impact on the psychological wellbeing of persons with dementia, which can be predictive of decline in learning and memory functioning. This study examined whether criticism mediates the association between relative distress and patient psychological wellbeing.

**Methods:** Sixty-one persons with a recent diagnosis of dementia (mean age 72 years, SD10.1) and their closest relative (79% spouses, mean age 66, SD12.05) were recruited via UK dementia services and assessed at two time points 6 months apart. Relatives completed questionnaire measures of burden and distress. Critical comments were coded from an interview. Patients completed questionnaire measures of quality of life, depression and anxiety. Correlation and regression analyses were conducted to explore the relationship between relative variables and patient psychological outcomes. Mediation analysis was used to look at the role of critical comments.

**Findings:** There was a significant correlation between relative distress and patient anxiety and depression at baseline and 6 month follow-up. Baseline relative distress predicted poorer quality of life in patients at 6 month follow-up. The effect of relative distress on patient quality of life was significantly ( $p < .01$ ) mediated by the number of relative critical comments

**Discussion:** Interventions addressing relative burden and distress and offering coping strategies to help them to reduce criticism of the patient would improve the quality of life of those affected by dementia.

11:15 - 11:30

## Predictors of 12-month long-term care placement among persons with dementia cared for by their spouse.

M. Perti<sup>1</sup>, S. Brennan<sup>2</sup>, I. Robertson<sup>2</sup>, B. Lawlor<sup>2</sup>

<sup>1</sup>Royal College of Surgeons, Ireland

<sup>2</sup>Trinity College Dublin, Ireland

**Background:** Delaying long-term care (LTC) placement and finding effective means of supporting persons with dementia (PwD) at home is increasingly important as the population ages and the prevalence of dementia increases. We identified the predictors of 12-month LTC placement among PwD being cared for by their spouse.

**Methods:** 253 spousal dementia caregivers, recruited through community services and supports and the media, completed assessments at baseline and 12-months later. We used logistic regression to identify the predictors of LTC placement at follow-up. Predictors included care-recipient factors (neuropsychiatric symptoms and functional impairments); caregiver health (chronic conditions, frailty and self-reported health), wellbeing (anxiety, depression, stress), and self-efficacy; and support service use (homecare and respite care).

**Findings:** At 12-month follow-up, 23 (9.1%) caregivers were bereaved, 177 (70%) were still caring at home, and 41 (16.2%) had placed their spouse in LTC; the status of 12 (4.7%) was unknown. Caregivers who accessed respite care (OR= .34,  $p < .05$ ) and those caring for PwD with fewer functional impairments (OR= 1.05,  $p < .05$ ) were less likely to have placed their spouse in LTC at follow-up. Caregiver-related factors were not significantly associated with LTC placement ( $p > .05$ ).

**Discussion:** Greater provision of respite care services for PwD may help to delay LTC placement. Our findings do not support the idea that caregiver stress and low self-efficacy increase the likelihood of institutionalisation; many caregivers who are in poor health themselves and/or experience high levels of distress continue to care for persons with dementia with severe neuropsychiatric symptoms at home.

11:30 - 11:45

## Stigma, nihilism, and uncertainty: Barriers to diagnosing dementia. A qualitative study.

S. Sadhwani<sup>1</sup>, E. Ford<sup>1</sup>, F. Henwoos<sup>2</sup>, H. Smith<sup>3</sup>

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**Background:** Early diagnosis of dementia has proven to benefit patients and their carers; improving health outcomes and increasing quality of life. It provides access to additional treatment and support services and allows patients and carers to plan effectively for the future. Yet, current research suggests that almost 50% of people living with dementia do not have a diagnosis in their health record. This study investigated specific barriers GPs face when presented with suspected dementia.

**Methods:** A qualitative study was conducted to identify factors that impede the diagnostic process. 15 GPs working in NHS England participated in one-to-one semi-structured interviews. Interviews were transcribed verbatim and analysed using Thematic Analysis.

**Findings:** 4 super-ordinate themes, overlapping in nature, were identified as the main barriers to pursuing a dementia diagnosis; perceived stigmatisation, clinical uncertainty, therapeutic nihilism, and medical priority.

**Discussion:** This study has identified a cultural context where GPs feel confident in recognising cognitive impairment; however, due to clinical uncertainty, a focus on management of symptoms, and at times a lack of confidence in secondary services, there is an overall reluctance to formally diagnose patients with dementia. Stigmatisation often results in both delayed help-seeking by patients and families, and a reluctance for clinicians to disclose suspicions of dementia

Targeted interventions that highlight the benefits of diagnosis at all stages of the illness will improve diagnostic rates. Ultimately, this will improve the quality of life of people living with dementia.

11:45 - 12:00

## Sleep, loneliness, and their impact on aspects of brain health: Findings from TILDA.

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**Background:** Previous research indicates that loneliness is associated with declines in semantic memory, which is an early indicator of Alzheimer's disease. Evidence also exists for an impact of loneliness on sleep such that individuals who are lonely experience more restless sleep. We wanted to explore whether restless sleep would mediate the association between loneliness and semantic memory.

**Methods:** Data pertaining to 8,163 participants in the Irish Longitudinal Study on Ageing (TILDA) across three waves of data collection were analysed using a path analysis framework. A mediation model (based on the product of coefficients method) was specified, with loneliness (scores on the 5-item UCLA loneliness scale) as the predictor, self-reported restless sleep as the mediator, and semantic memory (scores on a task of verbal fluency) as the outcome. Age, sex, and education were included as covariates. A maximum likelihood estimator was used.

**Results:** Results indicated good model fit ( $\chi^2_{29} = 1215.21$ ,  $p < 0.001$ ; CFI = 0.91, TLI = 0.74, RMSEA = 0.08, SRMR = 0.03). Loneliness predicted animal naming ( $\beta = -0.18$ ,  $p < 0.001$ ) as did restless sleep ( $\beta = 0.17$ ,  $p < 0.05$ ), and loneliness also predicted restless sleep ( $\beta = 0.08$ ,  $p < 0.001$ ). There was a mediation effect evident ( $\beta = 0.005$ ,  $p < 0.05$ ).

**Conclusion:** Results suggest that restless sleep has a mediating role in the association between loneliness and semantic memory. Interventions aimed at preventing Alzheimer's disease and cognitive decline in later life should consider intervening on loneliness and sleep quality in order to improve outcomes.



12:00 - 12:15

## Premature aging among trauma survivors: the impact of sleep disruptions on telomeres and cognitive performance

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**Background:** Sleep is necessary for brain function and recognized as playing a critical role in physical and cognitive processes. Sleep disruptions are common with aging and intensify among trauma victims. Former prisoners-of-war (ex-POWs) suffer from multiple aspects related to premature aging. This study assesses: (a) the link between sleep disruptions over-time in the prediction of cognitive performance as well as telomere length, and (b) the mediating role of telomeres within the association between sleep and cognitive performance.

**Methods:** This longitudinal study includes four assessments (1991, 2003, 2008, 2015) of Israeli ex-POWs (n=99) from the 1973 Yom Kippur War. Sleep disruptions were assessed using 3-items from the Brief Symptom Inventory and Posttraumatic Stress Disorder Inventory. Cognitive performance was assessed using the Montreal Cognitive Assessment. Average telomere length was measured by Southern blot. Genomic DNA was extracted according to the manufacturer's instructions and quantified. We conducted two sequential mediation models using multiple step mediation methodology.

**Findings:** Sleep disruptions over-time were related to lower cognitive performance and shorter telomere length. Moreover, telomere length mediated the relation between sleep disruptions over-time and cognitive performance.

**Discussion:** Captivity was shown to be a unique and powerful traumatic experience, leading to long-term sleep disruptions, which involved premature cellular senescence as reflected in cognitive performance and telomere length. These findings highlight the importance of viewing trauma victims as a high-risk population for sleep disruptions. Therefore, it is highly important to inquire about sleep problems and to diagnose cognitive disorders as a way to identify and treat premature aging.

# Barriers and enablers to healthcare change and implementation

11:00 - 12:30

Anderson

Konstadina Griva

11:00 - 11:15

## Implementation of a novel continuity of care model: a qualitative study with midwives and mothers

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<sup>2</sup>University of York, United Kingdom

<sup>3</sup>University of Leefs, United Kingdom

**Background:** Midwife-led continuity of care is known to improve a range of labour and birth outcomes for women and babies. Continuity of care involves providing a named midwife who follows women throughout their pregnancy, birth and postnatal period. However, few women receive this level of continuity in the UK. Whilst many studies report high levels of satisfaction amongst women, increased burnout and stress in midwives is also paramount. In this study, we explored the barriers and facilitators of implementing a novel model of continuity in the antenatal and postnatal period, excluding the birth.

**Methods:** Semi-structured interviews based on the Theoretical Domains Framework were undertaken with midwives providing continuity (n=7), midwives providing standard care (n=7) and mothers (n=15) who received their maternity care from the continuity care team. Interviews were recorded, transcribed and analysed using thematic analysis.

**Findings:** For continuity team midwives, manageable caseloads, extended appointment times, increased team stability, and flexible working patterns facilitated both care and midwives' job satisfaction. Both teams reported challenges in providing postnatal continuity given the unpredictable nature of labour. Time constraints, low staffing and lack of administrative support were additional barriers to implementing continuity in standard care. For mothers, continuity was integral to building trust with their midwife, encouraged disclosure of mental health issues and increased confidence in making birth choices.

**Discussion:** Midwives and mothers valued continuity despite exclusion of the birth element. However, several structural and resource barriers to implementing midwife-led continuity must be resolved before this model can be rolled out more broadly.

11:15 - 11:30

## Identifying drivers of suboptimal initiation onto dialysis so as to improve standard pre-dialysis renal services

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**Background:** Key to smooth transition from end-stage renal disease to dialysis is timely creation of dialysis access. Despite early referral to renal care and pre-dialysis education, the initiation onto dialysis is suboptimal, i.e. no permanent access which has clinical and health care implications. This study aimed to explore perspectives on preparation pathway so as to identify barriers to decision around timely access creation.

**Methods:** Face to face, semi-structured interviews were conducted with 88 participants (87% response) including CKD 4 patients, CKD 5 patients newly initiated onto hemodialysis [with/without arteriovenous fistula or graft], family members and renal health care professionals. Thematic analysis was used to analyse the transcripts.

**Findings:** Participants displayed differential levels of readiness towards access creation ranging from acceptance/active intention to prepare, wait-and-see, to avoidance and denial of diagnosis and need for dialysis. Five themes describing barriers to access creation were identified: lack of symptoms, dialysis fears and concerns [cost, family burden; needling, lifestyle disruption], concerns about fistula [viability, prompt for unnecessarily early initiation, fear of surgery], social influence [hearsay, family support/involvement, others' experience] and healthcare provider interactions [tension, trust/mistrust, lack of sufficient or clear information]. Peer learning, timely financial advice, emotional support and paced education were identified as critical to improving pre-dialysis renal health services.

**Discussion:** Individual, interpersonal, psychosocial factors compromise pre-dialysis education and contribute to suboptimal dialysis initiation. Given the dominance of didactic approach in renal services, our findings support the need for interventions to improve patient participation and engagement and to address emotional concerns and misperceptions.

11:30 - 11:45

## Adopting and diffusing innovation in healthcare: A multi-level qualitative exploration of the influence of evidence

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<sup>2</sup>University of Manchester, United Kingdom

**Background:** A range of evidence (from formal research to 'soft intelligence'/local data) influences the adoption or diffusion of innovation in healthcare. We explored how interactions between available evidence and processes at the professional, organisational and local system levels influence the adoption or diffusion of innovations in the UK National Health Service.

**Methods:** In-depth case studies were conducted on the use of evidence concerning the adoption or diffusion of three healthcare innovations. Qualitative data was collected through semi-structured interviews (79), non-participant observation (57 hours), and documentary analysis (86 documents). Thematic analysis combined inductive and deductive approaches.

**Findings:** Results demonstrate preferences for local data over research evidence. When research evidence is deemed to be important, its acceptance requires further contextualisation (e.g. alignment with local data/experience). At the professional level, evidence was used selectively to endorse pre-existing beliefs/goals, while changing stakeholders' beliefs/behaviour using evidence was challenging. At the organisational level, innovations were more likely to be supported if evidence was presented as 'a solution' to locally prioritised problems. However, organisations lacked effective formal channels for evidence communication. At the local system level, evidence must be sufficiently aligned with the wider political/economic context in order to receive local attention.

**Discussion:** The findings provide insights into how and why some evidence informs the adoption or diffusion of healthcare innovations, and why barriers persist in other cases. Interdependencies between processes at the professional, organisational and local system level suggest that alignment is needed to increase appropriate evidence use in the adoption and diffusion of healthcare innovation.

11:45 - 12:00

## Towards LGBTQ-affirmative cancer care and support: Barriers and opportunities

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<sup>1</sup>De Montfort University, United Kingdom

**Background:** Survey data suggest that LGBT people report lower levels of satisfaction with healthcare for cancer than heterosexuals. This presentation summarises findings from recent qualitative research to understand the experiences of British LGBT people with cancer and their long-term partners.

**Methods:** Participants were recruited through 5 oncology units at British hospitals, 2 cancer support charities and through media campaigns. In-depth interviews typically lasting between 45 and 75 minutes were carried out with 31 cancer patients who identified as lesbian (N=13), gay (N=14), bisexual (N= 3) and queer (N=1) and 9 long-term partners of cancer patients who identified as lesbian (N= 5), gay (N= 2) and trans\* (N=2). Data were analysed through thematic analysis.

**Findings:** Three themes are presented: Understanding the Motives, Meanings and 'Mechanics' of Disclosure explores how decisions around whether to 'come out' as LGBTQ are influenced by several factors including anticipated stigma, perceived moral or political 'obligation' and the manner of healthcare professionals. Creating and Communicating LGBTQ-Affirmative Spaces outlines anxieties faced by LGBTQ patients in interactions with staff and patients in clinical spaces such as waiting-rooms and hospital wards and the desire for more explicit evidencing of an anti-discriminatory culture. Finally Seeking LGBTQ-tailored Information and Support shows how current cancer support typically fails to meet psychosocial and psychosexual needs of LGBTQ patients.

**Discussion:** The findings can be used to influence policy and practice by statutory and voluntary agencies to ensure that effective oncology treatment is accompanied by an holistic understanding of the needs and concerns of LGBTQ patients

12:00 - 12:15

## Changing one's motivating style: Pre-service PE teachers' experiences in using motivational interaction techniques in practice

E. Renko<sup>1</sup>, A. Koski-Jännes<sup>2</sup>, T. Lintunen<sup>3</sup>, P. Absetz<sup>4</sup>, N. Hankonen<sup>1</sup>

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<sup>2</sup>University of Tampere, Finland

<sup>3</sup>University of Jyväskylä, Finland

<sup>4</sup>University of Eastern Finland, Finland

**Background:** Social environments that nurture psychological need satisfaction have been shown to foster autonomous motivation for physical activity (PA). Several training opportunities for professionals help them learn motivational, need supportive interaction (e.g., non-controlling language, reflective listening). However, we need more understanding of how to best facilitate uptake of key motivational interaction (MI) skills in daily professional practice. We investigate pre-service physical education (PE) teachers' experiences in using motivational interaction techniques during and after a training course.

**Methods:** Two university courses for students of PE teachers aimed to improve the use of motivational, need supportive techniques in PE teaching. A subsample of participants were interviewed (course 1, n=8; course 2; target n=12). Narrative analysis is used to explore the participants' experiences.

**Results:** The preliminary results on course 1 participants suggest that the participants generally experience that MI techniques were beneficial for fostering pupils' motivation and engagement in PE. However, the experiences formed two different storylines: Growth story in which the participants experienced that the positive professional growth and transformation occurred through learning the techniques. Challenge story in which the participants feared that some of the techniques (especially 'providing choice') might contrast with the traditional PE teacher expert stance, undermine the teaching structure and lead to chaos.

**Conclusions:** Using the techniques may require a new conceptualisation of the teacher role and relationships with the students. The findings can be used to improve acceptability of teacher trainings, to facilitate adoption of motivational interaction skills to promote PA.

12:15 - 12:30

## Optimising a toolkit to support hospital responses to feedback on transfusion practice

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**Background:** Audit and feedback is a widely-used healthcare improvement strategy. However, its effects are variable—potentially due to failing to optimise feedback documents and variation in how organisations respond to feedback. We aimed to optimise an audit-and-feedback intervention to support hospitals' responses to feedback within a national audit of blood transfusion.

**Methods:** Intervention-optimising strategies were: (a) Selecting intervention components based on theory and evidence; (b) Intervention piloting (with staff who received an intervention prototype by email). Feasibility and acceptability were assessed with staff who had used the prototype (semi-structured interviews) or not (think-aloud interviews); (c) Generating and applying criteria for intervention refinement; (d) Developing and delivering a co-intervention to enhance fidelity of the main intervention (to be evaluated in two cluster-randomised trials).

**Findings:** A paper-based toolkit was developed based on Control Theory. It included resources for sharing feedback with colleagues, action-planning, and monitoring behaviour. Twelve participants used the toolkit prior to interview. Twenty-six interviews (12 semi-structured; 14 think-aloud) were conducted. Themes included: comprehensibility; usefulness; engagement; intention. Criteria for deciding refinements included: consistency with evidence; frequency of staff reporting; reported by key-user versus stakeholder; accessibility; resource availability. Mode of delivery was changed to online. We developed telephone-support co-intervention materials (flowchart, manual) incorporating eight behaviour change techniques. In Trial 1, 91% of intervention clusters received telephone-support; 74% logged into the toolkit during calls.

**Discussion:** Using structured methods we developed, piloted, and refined an intervention that was feasible to deliver and acceptable to staff. Cluster-randomised trials will evaluate the effect of the toolkit.



# Treatment and prevention of pain disorders

11:00 - 12:30

Kirwan

Brian McGuire

11:00 - 11:15

## Exploring pain and the impact of Juvenile Idiopathic Arthritis in those 16-25: A mixed-methods study

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<sup>4</sup>Academic Rheumatology, King's College London, United Kingdom

**Background:** Pain experience and impact on daily life has been relatively unexplored in adolescents and young adults with Juvenile Idiopathic Arthritis. This study aimed to establish prevalence of, and associations with pain and qualitatively explore impact on daily life.

**Methods:** This cross-sectional mixed-methods study recruited 85 young patients assessing pain intensity (APPT) as the primary outcome, with mood (HADS), illness perceptions (B-IPQ), fatigue (FACIT-F), functioning (WSAS), quality of life (MSK-HQ), demographics and disease activity as predictors. Analysis used spearman's correlations and hierarchical multiple linear regression. Semi-structured interviews with 15 patients were conducted and analysed using inductive thematic analysis. Ethical/R&D approvals were obtained.

**Findings:** In the survey, prevalence of pain was 91.8%, with 37% reporting medium-to-severe pain. Despite high prevalence, during interviews, pain was only ranked fourth most impacting on life; after fatigue, mood, social aspects, and preceding impaired functioning. Potential relationships included mood linked to pain, impaired physical and social functioning, and medications thus preventing a "normal" life. In the survey, pain intensity was moderately associated with biological variables ( $r_s=.27$ ), and strongly associated with psychological variables ( $r_s=.53$  and  $r_s=.50$ ). Demographic and clinical variables explained 13.4% of variance in pain intensity. Adding distress, fatigue and impaired functioning explained an additional 24.8%, and illness perceptions a further 30.4%. Identity and Consequences illness perceptions accounted for 70.5% of the association between active joints and pain.

**Discussion:** Findings support a biopsychosocial model approach of pain, highlighting importance of considering psychological variables such as illness perceptions, with impact of disease going beyond pain and inflammation.

11:15 - 11:30

## Barriers and facilitators of exercise adherence in patients with persistent musculoskeletal pain: qualitative interview study

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**Introduction.** Persistent musculoskeletal pain (PMSK) affects the axial skeleton and persists  $\geq 3$  months. Active treatments, such as exercise recommended by healthcare professionals (HCP), improve pain and function but many people do not adhere. Understanding the barriers and facilitators of exercise adherence would aid in the development of a successful intervention. This qualitative interview study aimed to explore the factors that influence exercise adherence from the perspective of PMSK patients.

**Methods:** Semi-structured interviews were conducted by one researcher with participants with PMSK from three outpatient physiotherapy clinics until data saturation of themes was reached. Ethical approval was obtained (REC:17/WM/0249). Topic guides were informed by past literature about exercise adherence behaviours. Interviews were audio recorded and transcribed verbatim. Data was analysed in NVivo V11.4 using framework analysis informed by the Theoretical Domains Framework. Coding was validated by a second researcher.

**Results.** 20 participants with PMSK (ageM=45(14), 71% female, 6 low back pain, 4 fibromyalgia, 3 shoulder, 3 hip, 2 osteoarthritis, 2 knee) were interviewed. Three themes were identified: interactions with HCP; availability of additional support; and pairing exercises with other activities. Participants described how positive relationships with their HCP; individualised exercise plans; linking prescribed exercise with enjoyable or practical activities; and access to resources to assist in remembering exercises between appointments, facilitated exercise adherence.

**Conclusions.** The findings suggest a good relationship with a HCP and a collaborative action plan were important to participants. These results will inform the development of a targeted behaviour change intervention to enhance adherence to exercise.

11:30 - 11:45

## OSTQOL – A measure of quality of life for patients in opioid substitution treatment

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**Background:** Opioid substitution treatment (OST) is an evidence-based intervention for patients with opioid dependence. Quality of life (QOL) research of patients undergoing OST is lacking a treatment-specific psychodiagnostic questionnaire to assess the QOL of this target group. Aim of the presented study was to develop a suitable QOL instrument for OST patients to fill the gap.

**Methods:** Focus group interviews with 60 OST patients were analysed to define key QOL themes as perceived by the patients. Based on these themes items were developed and refined through pilot testing and cognitive debriefing. The resulting 82 items were investigated in a sample of 577 OST-patients. Explorative factor analyses (PCA, varimax rotation) were used to define a factor structure and reduce the number of items. Reliability and validity were analysed.

**Results:** Explorative factor analyses revealed 6 subscales with 38 items (46.1% explanation of variance): Personal Development, Mental Distress, Social Contacts, Material Well-being, Opioid Substitution Treatment, and Discrimination. Reliability of the 6 subscales ranged from acceptable to good (Cronbach's Alpha = 0.75 to 0.88) and convergent and discriminant validity was proven regarding correlations with demographic data as well as with the BSI-18.

**Conclusion:** The Opioid Substitution Treatment Quality of Life Scale (OSTQOL) is a multidimensional questionnaire showing acceptable to good reliability and good validity indicators. Burdens for respondent and administrator were low. Further studies regarding the ability of OSTQOL to measure changes as well as the stability of the factor structure will be investigated in a following study.

11:45 - 12:00

## Fibromyalgia biopsychosocial stress profile: heart rate variability, distress and stressors.

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**Background:** Fibromyalgia is a chronic pain syndrome with uncertain pathogenesis which still requires measurable biomarkers for the identification of affected individuals. Research suggests that stress regulation problems may account for this condition. The aim of this study was (1) to compare a fibromyalgia group with a pain-free control group in the physiological (heart rate variability-HRV) psychological and social stress; and (2) to determine whether these characteristics (simultaneously) classify with accuracy women with fibromyalgia.

**Methods:** A prospective cross-sectional study and discriminant analyses were performed. We compared fibromyalgia (n=47) and pain-free control women (n=47) in the HRV (as an objective indicator of the autonomic nervous system-ANS and the hypothalamic-pituitary-adrenal), distress and social stress (respectively assessed with the HAD and the SRRS)-

**Findings:** Women with fibromyalgia showed a dysregulated ANS function (high sympathetic activity and low parasympathetic activity at rest) and high levels of psychological distress and social stress. This profile ranked between 70-74% of women with fibromyalgia and 85-87% of pain-free women. The discriminant function showed medium-high adjustment levels ( $\lambda$  .59;  $p < .00$ ), in which distress had the greatest weight, followed by social stress and physiological activity.

**Discussion:** There is a specific biopsychosocial stress profile in fibromyalgia, the evaluation of which (including an objective biomarker) could be used in diagnosis, to structure treatment, and to evaluate its effects.

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12:00 - 12:15

## An examination of clinical judgment making regarding chronic lower back pain: Three studies

C. Dwyer<sup>1,2</sup>, H. Durand<sup>1</sup>, P. MacNeela<sup>1</sup>, L. O'Connor<sup>2</sup>, B. Slattery<sup>1,2</sup>, S. O'Higgins<sup>1,2</sup>, B. McGuire<sup>1,2</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>Centre for Pain Research, Ireland

**Background:** Chronic lower back pain (CLBP) is a major healthcare problem, though appropriate management and treatment is often difficult. A majority of cases are non-specific in terms of underlying pathology. Modern conceptualisations of pain adopt a biopsychosocial approach, providing a model for understanding importance of contextual interactions between psychosocial and biological variables.

**Methods:**

Three studies:

- (1) Using fictional CLBP cases, differences in GPs' clinical judgment weighting regarding pain severity and patient's risk of future disability were examined through judgment analysis;
- (2) Medical students' clinical judgement accuracy, weighting and speed, plus biopsychosocial approach knowledge, empathy, and pain attitudes and beliefs were examined pre- and post- biopsychosocial approach education (N = 32), compared with controls (N = 31);
- (3) Interactive management was used to model factors influencing application of the biopsychosocial approach to clinical judgement-making, based on medical students' conceptualizations of factors.

**Findings:** (1) GPs placed more emphasis on biomedical indicators when judging case severity, yet more weight on psychosocial cues regarding future risk of disability;

(2) Positive effects of educational intervention on knowledge, pain-related attitudes and beliefs and judgement weighting of psychologically-based cues;

(3) Seven core biopsychosocial approach application categories; 'GP attitudes' was the most critical driver of all competencies; cost and GP knowledge were secondary drivers.

**Discussion:** Results indicate GPs' decisions regarding CLBP differ regarding context of the decision and attitudes, relevant knowledge and cost may impact such judgments; training may overcome these factors and facilitate a more biopsychosocial approach.

12:15 - 12:30

## A skeptical look at acceptance and commitment therapy for pain

J. Coyne<sup>1</sup>

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**Objective:** To first evaluate the distinctive basic premises and essence of acceptance commitment therapy (ACT) for pain. Second, to evaluate the evidence for ACT including the prospects for ACT to become a frontline evidence-based treatment shown to be more effective than alternatives.

**Methods:** Narrative review based on systematic search for relevant meta-analyses and RCTs, applying accepted criteria for risk of bias and study quality. Comparison of the ACT literature to what is known about head-to-head comparisons of psychotherapeutic interventions.

**Findings:** A paucity of relevant RCTs requires a meta-analysis to integrate diverse studies that are heterogeneous with respect to the nature of pain and patient population. Some evidence is accumulating that ACT is superior to inactive, but not active control groups. There's a lack of evidence that adding ACT to an existing evidence-based pain program would improve effectiveness. Claims about ACT reducing pain levels, rather than affecting adjustment to pain are unwarranted. Studies of mediators of ACT therapy for pain are limited by the psychometric properties of theoretically-relevant mediators.

**Discussion:** The quantity and quality of studies evaluating ACT is less than for alternative, evidence-based treatments. There is a need, not yet met, to discuss efficacy for pain for acute versus chronic; cancer versus noncancer; and for various musculoskeletal pains for which there are evidence-based treatment protocols. It's unlikely that a superiority for ACT will be established. However, presentation of ACT as a philosophy, a way of life, and even a community provides a non-evidence-based appeal to clinicians over other treatments.

# Health behaviour models tested and applied in healthcare contexts

11:00 - 12:30

Larmor

Julia Allan



11:00 - 11:15

## Psycho-social analysis of relatives' decision about deceased organ donation: multicenter study in the Spanish context

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<sup>2</sup>Universidad Autónoma de Madrid, Spain

<sup>3</sup>UNIR-Universidad Internacional de la Rioja, Spain

Family refusal to organ donation of a deceased relative represents one of the most important barriers to organ transplantation. The objective of this work is to analyse relationships between bereaved relatives' decision and factors that converge in family decision taking as reference decision making under stress, grief-bereavement and prosocial behaviour frameworks. An observational study was carried out in 16 Spanish hospitals during a 36-month period collecting data of 421 cases of family decision about donation (338 donations/83 refusals) by means of a previously validated structured instrument. Indicators of the following factors were collected: deceased's characteristics; circumstances of death; bereaved relatives' characteristics, beliefs, and expressions; behaviour of health and coordination staff; and family's emotional responses. Data were structured and analysed to test three global hypotheses. Bivariate and multivariate analysis was performed. Firstly, Logistic Regression Modelling showed 87,6% of correct prediction of family decision (-2LLR= 228,4;  $p < .001$ ) and yielded relevant relationships between family decision and deceased's expressed wishes (-2LLR=113,6,  $p > .001$ ), satisfaction with medical attention (-2LLR= 17,5;  $p < .001$ ) and personal treatment (-2LLR=14,3;  $p = .001$ ) and emotional responses (-2LLR=8,6;  $p = .003$ ). Secondly, evidenced that the influence of factors on family decision varies as a function of the deceased's wishes as expressed by the relatives. Finally, Correspondence Analysis yielded relevant inter-relationships among factors, revealing that the deceased's wishes as stated by the relatives may be modulated by concurrent processes like the perception of medical attention and personal treatment. Family decision and, subsequently, organ retrieval, may greatly benefit from a more complex, integrated and theoretically based approach.

11:15 - 11:30

## Nurses make different decisions before and after breaks: decision fatigue effects in clinical decision making

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**Background:** 'Decision fatigue' is a cognitive bias where people display a progressive shift from effortful/risky to easier/safer decisions as the number of decisions taken without a break increases. The present study investigates whether decision fatigue effects are evident in nurses working for a telephone helpline.

**Methods:** In an observational, repeated-measures study of 150 nurses working for the NHS24 telephone helpline, data from >5,000 calls were modelled to determine whether the likelihood of a nurse making a clinically safe but potentially resource inefficient decision (refer patient to another health professional the same day) varied predictably according to the number of calls taken/time elapsed since a nurse's last break.

**Findings:** Mixed-effect logistic regression analyses demonstrated that for every consecutive call taken since last break, nurses were 3.5% more likely to recommend that callers see another primary or secondary care professional within 12 hours, an increase in probability of 11.9% per hour or 19.7% (on average) from immediately after one break to immediately before the next. In contrast, decision outcomes were not related to general fatigue (time since start of shift) or cumulative workload (calls since start of shift).

**Discussion:** Every consecutive decision that nurses make since their last break is associated with a predictable shift towards safer but less efficient decisions. Such effects may gradually reduce service efficiency over the working day and increase burden on frontline services. Future research should focus on identifying optimal patterns of breaks during shifts to optimize the efficiency and stability of clinical decision making over time.

11:30 - 11:45

## Knowledge, attitudes and practice of oncologists in promoting physical-activity to cancer survivors: an international survey

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**Background:** Few survivors are meeting the recommended physical activity (PA) guidelines. Despite patients' wishing to receive PA information from their oncologist, many do not receive PA guidance. Given that oncologists review their patients regularly and are perceived as authority figures, they are uniquely positioned to promote PA. Future interventions that bypass the oncologist are unlikely to be scalable. The study aim was to investigate knowledge, barriers, and practices of oncologists towards PA in survivors, and the association between oncologists' own PA behavior and PA promotion.

**Methods:** Oncologists (n=123) completed a survey based on the Theory of Planned Behavior (TPB). Participants reported PA promotion behaviour, attitudes, intentions, social norm, Perceived Behavioral Control (PBC), confidence and knowledge of exercise prescription. Structural equation modelling evaluated these associations.

**Findings:** Less than half of oncologists reported regularly promoting PA (46%). Only 26% were physically active. TPB SEM pathways explained 54.6% of the variance in PA promotion (CFI=0.905, SRMR=0.040). Social norm was the only significant pathway to intention, but also a significant indirect pathway to PA promotion (p=.007). Confidence to promote PA, PBC and intentions were direct significant pathways to PA promotion (p<.05). Exploratory SEM pathways explained 19.6% of the variance of PA behaviour and PA behaviour was a direct significant pathway to PA promotion (p < 0.05).

**Discussion:** Oncologists reported a modest ability to promote PA, low PA promotion rates and limited knowledge of exercise prescription. Patient PA promotion may be improved through strategies that increase oncologists' PBC, confidence and their own PA participation.

11:45 - 12:00

## Two single-blind randomised trials investigating affective attitudes and intention to become an organ donor

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**Background:** Eliciting different attitudes with survey questionnaires appears to impact on intention to donate organs. However, previous research was limited by having different numbers of items, or different modes of intervention delivery, when comparing groups. We tested the effect of including or excluding affective attitudinal items on intention to donate, using two modes of delivery and a constant total number of items.

**Methods:** Study 1: A multi-country (Ireland, UK, Malaysia, India), single-blind cross-sectional randomised trial (NCT02825862) conducted by separate interviewers recruited 909 participants, who were assigned to three groups: including all affective attitude items, affective attitudes replaced (with dummy items), negatively-worded affective attitudes only replaced. Study 2 recruited an representative, cross-sectional sample of 616 UK participants using an online methodology, randomly assigned to the same conditions. Multilevel models assessed the effects of group membership on the primary outcome: intention to donate.

**Findings:** In study 1, intention to donate did not differ among groups (p-values ranging from 0.416 to 0.775). Study 2 found a small but significantly higher intention to donate in the group with negatively-worded affective attitudes replaced ( $\beta=0.32$ , 95% CI 0.02 to 0.61,  $p=0.039$ ) when compared to the group including all affective attitude items. Combining the data from both studies yielded no significant group differences (p-values from 0.133 to 0.760).

**Discussion:** Contrary to previous research, theoretical content may be less relevant than the numbers of questionnaire items, or form of intervention delivery, for intention to donate organs.

12:00 - 12:15

## The influence of health hardiness on the relations between depression and physical activity

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**Background:** Depression is associated with adverse health behaviours such as low physical activity levels. Several other factors found to impact on health behaviours include health hardiness, which was found to increase health promoting behaviour frequency, and sleep disturbances, which was associated with decreased health promoting activities. This study aimed to examine the moderating and mediating effects of health hardiness and sleep on the relation between depression and physical activity.

**Methods:** This is a sub study of the 45 and Up Study including 1804 women aged 53 to 95 years diagnosed with chronic conditions (asthma, depression, diabetes, osteoarthritis, or osteoporosis). Depression (CESD-10), the 'perceived control' component of the Health Related Hardiness Scale (HRHS), sleep disturbances (MOS), and physical activity levels were measured. Moderator and mediator analyses were conducted using the PROCESS Macro for SPSS 24.0.

**Results:** The relation between depression and physical activity was fully mediated by health hardiness ( $\beta=27.9$ ,  $t=6.66$ ,  $p<0.01$ ), with higher perceived control linked to higher physical activity. The path between hardiness and physical activity was moderated by sleep problems ( $\beta=-0.35$ ,  $t=2.13$ ,  $p=0.03$ ), with women experiencing high sleep disturbances showing no influence of health hardiness on physical activity (overall model:  $F(1802,1)=286.4$ ,  $p<0.01$ ).

**Discussion:** Perceived control, a health hardiness dimension, mediates the effect of depression on physical activity, but only in women without severe sleeping disturbances. These findings suggest that while beliefs about perceived control may impact on health behaviours such as physical activity, there are other factors that need to be considered in management of depression and well-being.

12:15 - 12:30

## A qualitative study of men's attitudes to UV exposure and a facial morphing intervention

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**Background:** Skin cancer is a growing problem globally; however, interventions targeting UV exposure have largely ignored men, despite men possibly being prone to riskier sun exposure than women. Previous research suggests that appearance-focused techniques such as facial morphing (demonstrating hypothetical future damage to the face due to sun exposure) can increase sun protection motivations among older women and younger men. The current study investigates whether this could also be effective for older men.

**Method:** Semi-structured interviews were carried out with 25 men aged between 35 and 61 years. Attitudes to UV exposure and reactions to a facial morphing intervention were examined. Interviews were subjected to thematic analysis.

**Findings:** Three themes were identified: activity and objectivity; gendered appearance; and directly related to the intervention: motivations, health concerns and scepticism. Although aware of sun safety recommendations, these men largely failed to identify gaps in their personal sun protection use, demonstrating masculine attitudes and a lack of concern about ageing and appearance. These attitudes fed into motivation to change behaviour due to health concerns following the intervention, or a lack of motivation due to acceptance of the ageing process.

**Discussion:** Older men may experience different barriers to adopting sun protection behaviours, compared to women of similar age. Facial morphing can be effective in reducing UV exposure, but may need to be reframed to focus on health implications and personal choice. Masculine attitudes may need to be taken into account, as this is likely to impact the effectiveness of any intervention among men.

# Lifestyle change

11:00 - 12:30

Room 201

Bradley Collins

11:00 - 11:15

## Systematic review of alcohol interventions for people living with and beyond cancer

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<sup>1</sup>Teesside University, United Kingdom

**Background:** Evidence suggests that patients living with and beyond cancer continue to engage in risky behaviours such as limited physical activity and risky alcohol consumption. The objective of this systematic review was to establish the extent of the literature around the effectiveness and acceptability of interventions targeting alcohol use for patients living with and beyond cancer.

**Methods:** Electronic searches were conducted of online databases: PubMed, MEDLINE, and SCOPUS, as well as unpublished theses and reports by charities. Included were studies where interventions were delivered to individuals living with and beyond cancer, where alcohol was either a primary or a secondary outcome. All searches were undertaken in December 2016 and updated in December 2017 to identify additional publications.

**Findings:** Eight papers met the inclusion criteria for this review. Only one of the included papers reported that participants reduced alcohol consumption at follow-up when compared to control participants. However it should be noted that, six of the eight papers reported secondary analysis of studies where alcohol had not been one of the primary aims in the original study. Studies were quality assessed using critical skills appraisal programme (CASP) checklists and were rated as being of moderate or high quality.

**Discussion:** There is a lack of interventions which have a focus on alcohol use following a cancer diagnosis. Alcohol use can increase the risk of secondary or recurrent cancer. Therefore, there is a need for more research to explore the potential for interventions to encourage people diagnosed with cancer to drink less alcohol.



11:15 - 11:30

## 'Lifestyle change not quick fix': transferability of Football Fans in Training to new target groups

C. Donnachie<sup>1</sup>, C.M. Gray<sup>2</sup>, A. MacLean<sup>1</sup>, S. Wyke<sup>2</sup>, D. Wight<sup>1</sup>, C. Bunn<sup>2</sup>, K. Hunt<sup>1</sup>

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**Background:** Football Fans in Training (FFIT) is a weight management programme designed specifically for overweight/obese men, and delivered through Scottish professional football clubs by community coaches. However, the programme's success has led it to be delivered to women-only groups at 31 clubs. The extent to which FFIT is transferable to women is not yet well understood.

**Methods:** Semi-structured telephone interviews were conducted with participants (N=17) and coaches (N=4) following deliveries of FFIT-for-Women. Data were analysed thematically to explore the extent to which the core components of FFIT are transferable to women and whether/how the programme influences women's motivation using Self-Determination Theory (SDT).

**Findings:** Compared to men, the majority of women had experienced long histories of weight cycling prior to enrolling on FFIT. However, like men, FFIT offered women a holistic approach to weight management, instead of a 'diet', focusing on gradually increasing physical activity (PA) and healthy eating. The group setting was perceived as a 'safe place' to engage in PA and adopt behavioural changes with like-bodied women, congruent with men who appreciated being with others 'like them'. Consistent with the men, some women demonstrated internalised motivation to implement lifestyle changes, in line with SDT. However, coach interviews revealed mixed weight loss success compared to the men and suggested women's relationships with food were more 'complex'.

**Discussion:** There are ways in which FFIT is transferable to women. However, contextual factors, including women's prior experiences of food restriction for weight control influence motivation/programme mechanisms. These should be considered when optimising FFIT-for-Women.

11:30 - 11:45

## Developing a story-telling intervention embedding behaviour change techniques (BCTs) to promote smoking cessation during pregnancy.

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<sup>4</sup>University of Stirling, United Kingdom

<sup>5</sup>University of Highlands and Islands, United Kingdom

**Background:** Smoking during pregnancy is a major risk to mother and infant health, with higher levels found in more deprived groups. Uptake of smoking cessation services remains low and current interventions have had limited effectiveness. Self-help interventions are low-cost, wide-reaching, reduce barriers of time and feeling judged. This paper describes the development of 'SKIP IT'-a text based intervention combining story-telling techniques with embedded BCTs to promote smoking cessation during pregnancy.

**Methods:** A three-part literature review extracted relevant theory, 'intervention ingredients' for promoting cessation, and optimal mode of delivery. A qualitative study explored women's visualisation and conceptualisation of their fetus. Using this evidence, a story-telling writing group, including service user representatives and professional scriptwriter, developed the prototype intervention by: operationalising intervention aims, embedding theoretical elements into an engaging storyline and images, and assembling them into text-messages. The intervention was refined by consulting health professionals and target user demographic.

**Results:** Literature review indicated six elements that would likely promote cessation: partner motivation, social support, risk perceptions, concreteness of baby and risk, coping skills, and maintaining social networks. Raised risk perceptions and self-efficacy were found to be key targets for change. Text-messages, images and narrative were found to be optimum modes of delivery. The resulting storyline follows Megan, a woman who is pregnant and trying to stop smoking. It embeds specific BCTs while narrating the barriers she encounters and overcomes.

**Discussion:** Combining narrative story-telling with BCTs is a promising method for communicating health information in an easily understood, engaging and appealing way.

11:45 - 12:00

## Tobacco smoke exposure counseling promotes sustained cotinine reduction and cessation among non cessation-seeking maternal smokers.

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<sup>1</sup>Temple University, United States

<sup>2</sup>University of Arizona, United States

**Background:** Reducing children's tobacco smoke exposure (TSE) remains a public health priority, particularly in low-income communities bearing higher exposure rates and greater tobacco-related morbidity/mortality burden than the general population. In this randomized controlled trial, we tested the efficacy of behavioral counseling to reduce preschoolers' TSE among low-income maternal smokers.

**Methods:** We randomized 300 maternal smokers who were not planning to quit smoking to receive either standard care (brief advice plus written materials) or behavioral counseling (2 home visits and up to 7 follow-up phone sessions) over 16 weeks designed to facilitate child TSE reduction. No medications or nicotine replacement were provided. We assessed child cotinine (primary outcome) and bioverified 7-day point prevalence quit status (exploratory outcome) at 16-week end of treatment (EOT) as well as 3- and 12-month post EOT follow-up. Multivariable log-normal mixed effects models and generalized linear mixed models with controlling variables examined treatment effect on cotinine and quit status through 12-month.

**Findings:** Smokers were >80% African American and single. A decline in cotinine was significant in both groups, with mothers in counseling showing greater decline than controls across all time points ( $p=.03$ ). Counseling group mothers were 9.7 times more likely to have bioverified quit status than controls.

**Discussion:** Results suggest that, compared to standard care for TSE reduction, TSE counseling promotes not only greater reductions in child TSE, but also greater likelihood of cessation. Importantly, counseling boosted quit rates among low-income maternal smokers encouraged to enroll even if they were interested in quitting smoking at enrollment.

12:00 - 12:15

## An RCT of a brief alcohol intervention for young people aged 14-15: SIPS JR-HIGH

E. Giles<sup>1</sup>, G. McGeechan<sup>1</sup>, D. Newbury-Birch<sup>1</sup>

<sup>1</sup>Teesside University, United Kingdom

**Background:** The percentage of young people who have ever had an alcohol drink in England increases with age. This study evaluated the effectiveness and cost-effectiveness of alcohol screening and brief intervention to reduce risky drinking in young people aged 14-15 in the English school setting.

**Methods:** Thirty schools in England were involved in the trial. Young people (n=443) who screened positive for risky drinking using a single item screen (ASAQ – adjusted student alcohol questionnaire) were allocated to a control arm consisting of usual school-based education on alcohol issues, or to the intervention arm augmenting usual education with a 30 minute brief intervention, both delivered by school pastoral staff (233 control; 210 intervention). The intervention encompassed the elements of the FRAMES approach for eliciting behaviour change: Feedback, Responsibility, Advice, Menu, Empathy, and Self-efficacy. A 28-day timeline follow-back measured total alcohol consumed as the primary outcome measure at 12-month follow up.

**Findings:** The results showed no significant difference between arms in the trial for the primary outcome (TLFB). In both arms, significantly less young people scored positive on the AUDIT but there were no differences between the groups.

**Discussion:** The study was well received in the school setting. We found no differences in the primary outcomes however the results showed that those who scored positive on the AUDIT reduced in both arms between baseline and follow-up. This implies that simply talking about risky drinking can be useful with young people.

12:15 - 12:30

## The direction of relationship between smoking and self-efficacy during a quit attempt: an n-of-1 study

F. Naughton<sup>1</sup>, A. Deniszczyc<sup>2</sup>, S. Sutton<sup>2</sup>

<sup>1</sup>University of East Anglia, United Kingdom

<sup>2</sup>University of Cambridge, United Kingdom

**Background:** Any smoking (lapse) in the first week of a quit attempt increases the risk of long term relapse fivefold (Ashare et al, 2013). Preventing lapses should be a key focus of smoking cessation interventions. Self-efficacy is associated with smoking in between-participant studies, although the direction of this relationship is poorly understood. Using within-person methods that allow for lagged analyses, we assessed the direction of this relationship among smokers making a quit attempt.

**Methods:** Participants were smokers (N=8) participating in a smoking cessation app study, with high adherence to end of day Ecological Momentary Assessment surveys (>75%) over 3 weeks during a quit attempt (167 observations). Daily measures were self-efficacy to quit smoking permanently, strength and frequency of urges to smoke in the past 24 hours and any smoking that day (binary). Multilevel models were run (level 1: daily observations, level 2: participants) to test whether: a) yesterday's smoking predicts today's self-efficacy and b) yesterday's self-efficacy predicts today's smoking (fixed effects). Models were adjusted for autocorrelation of the dependent variable and urges to smoke.

**Findings:** Yesterday's smoking did not predict today's self-efficacy ( $b=0.14, p=0.20$ ), but yesterday's self-efficacy independently predicted today's smoking ( $b=-0.07, p=0.02$ ). Urges in the past 24 hours independently predicted today's self-efficacy ( $b=-0.10, p=0.01$ ) and today's smoking ( $b=0.06, p<0.001$ ).

**Discussion:** Reduced self-efficacy emerged as a risk factor for lapse/relapse the following day, yet self-efficacy was resistant to a previous day's smoking. The findings support self-efficacy as a target for lapse prevention interventions, with urge reduction as one potential method of achieving this.

# Health behaviours, well-being and developmental context

11:00 - 12:30

McMunn

Martin Dempster

11:00 - 11:15

## Determinants of children's unhealthy sleep behavior perceived by children and parents: a concept mapping study

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<sup>3</sup>Vrije Universiteit Amsterdam, Netherlands

**Background:** Unhealthy sleep behavior (e.g. inadequate sleep duration, low sleep quality) is of significant importance for children's health and psychosocial development. For intervention development, insight into determinants of children's unhealthy sleep behavior is needed. Currently, perspectives of parents and children on potential determinants are underexplored. Hence, we aimed to investigate the determinants of unhealthy sleep behavior in primary school children by synthesizing perspectives from both children and parents using concept mapping.

**Methods:** Concept mapping is a participatory mixed methods approach that provides unique insight into a group's thoughts and perspectives. We comprised four groups of 7-9 parents of 4-12 year old children and six groups of 5-9 children aged 9-12 years old, who participated in two sessions: 1) a brainstorm on potential determinants of children's unhealthy sleep behavior, and 2) a session in which each participant sorted determinants that they perceive to conceptually relate and ranked them on relevance. Next, we conducted multidimensional scaling and hierarchical cluster analysis, wherein we created maps that graphically presented the relation between perceived determinants.

**Findings:** Thirty parents and 44 children participated. Both children and parents identified children's positive and negative feelings (e.g. stress, being afraid, excitement), behavior before bedtime (e.g. screen use, physical activity, nutrition), and sleep environment (e.g. noise, temperature bedroom) as determinants of children's unhealthy sleep behavior.

**Discussion:** Our study supported existing literature but also identified new concepts, such as children's feelings. Multifactorial interventions are needed that target the identified cognitive, behavioral and environmental determinants to promote healthy sleep behavior in children.

11:15 - 11:30

## Evaluating the implementation of a social emotional well-being programme in disadvantaged post-primary schools

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**Aim:** This study evaluates the impact of the MindOut (2) social emotional well-being programme for adolescents aged 15-18 years old in Irish post-primary schools. The evaluation assesses the effectiveness of the programme as delivered by teachers.

**Methods:** A cluster randomised controlled trial was conducted with Transition Year (TY) and 5th Year students (n=497) from 32 DEIS schools who were randomly allocated into either a control or intervention group. The primary outcomes for this study included social and emotional skills, academic performance and mental health outcomes. Data were collected from students at baseline and post-intervention. Linear mixed models (LMM) were employed to account for clustering within schools.

**Results:** At post-intervention, there were significant improvements in students' social and emotional skills including; reduced suppression of emotions ( $p = .019$ ); use of more positive coping strategies [reduced avoidance coping ( $p < .001$ ) and increased social support coping ( $p = .044$ )]; and significant increases in mental health and well-being with reduced levels of stress ( $p = .017$ ) and depression ( $p = .030$ ). A majority of students (63.8%) rated their experience of the programme as good/very good and teachers also reported their experience as positive, rating the programme highly out of ten ( $M = 7.8$ ,  $SD = .62$ ).

**Conclusion:** The evaluation findings indicate that the MindOut programme had a significant positive impact on students' social and emotional wellbeing and mental health outcomes. The study supports the effectiveness of MindOut and its delivery within the SPHE senior cycle curriculum. A twelve month follow-up is underway, including analysing the influence of levels of implementation on student outcomes.



11:30 - 11:45

## Transition to parenthood: does relationship training affect child behavior?

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**Background:** Transition to parenthood puts a burden on the marital relationship, which in its turn might also affect the well-being of the child. This may especially be true for those families already exposed to other risk factors. Training programs for couples facing the birth of their first child can reduce the negative influence of some of those factors, resulting in a better dyadic coping, more relationship satisfaction and realistic expectations. The main hypothesis is here that this will also have a beneficial effect on the child, e.g. better sleeping and less crying behavior.

**Methods:** In a randomized controlled pre-post-follow-up design, 210 couples were assigned to one of three conditions: the Couple Care and Training Program (CCC-P), which is designed to support couples during and after the transition state to first parenthood (n=70), a self-directed learning approach with a DVD to learn knowledge and skills needed to adapt to parenthood (n=70) and treatment as usual (TAU) (n=70).

**Findings:** Analysis suggests that relationship satisfaction and the subjective perception of crying behavior are negatively correlated ( $r = -.15$ ,  $p < .001$ ). This correlation is stronger for the mothers ( $r = -.17$ ,  $p < .01$ ) than for the fathers ( $r = -.14$ ,  $p < .05$ ). Mothers who did not involve an expert for support showed a higher increase in stress during the transition period than those who did.

**Conclusion:** Especially for couples at risk, training programs can improve child behavior and reduce stress among couples.

11:45 - 12:00

## Does sleep mediate the association between school pressure, physical activity, screen-time and psychological distress?

A. Vandendriessche<sup>1</sup>, A. Ghekiere<sup>1</sup>, J. Van Cauwenberg<sup>1</sup>, B. De Clercq<sup>1</sup>, K. D'hondt<sup>1</sup>, A. DeSmet<sup>1</sup>, M. Verloigne<sup>1</sup>, B. Deforche<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

This study examines the mediating role of sleep duration and sleep difficulties on the association between screen-time, school pressure, physical activity and psychological distress in adolescents. Data were retrieved from 49403 children ( $13.7 \pm 1.6$  years old, 48.1% boys) from 12 countries participating in the WHO 'Health Behaviour in School-aged Children' study conducted in 2013/2014. Psychological distress (feeling low, irritability or bad temper, feeling nervous), school pressure, physical activity (number of days/week 60 min moderate-to-vigorous), screen-time behaviours (TV, gaming, other purposes), sleep duration on week- and weekend days and sleep difficulties (perceived difficulties in getting asleep) were assessed using a validated self-reported questionnaire. Multilevel mediation analyses were conducted using the statistical program R.

School pressure (ref. 'none'; 'some'  $B=0.40$ ,  $p=0.01$ ; 'a lot'  $B=0.86$ ,  $p=0.01$ ) and screen-time ( $B=0.04$ ,  $p=0.001$ ) were positively associated with psychological distress, while physical activity ( $B=-0.02$ ,  $p=0.002$ ) was negatively associated. Except for sleep duration in the association between physical activity and psychological distress, all associations were significantly mediated by sleep duration on week- and weekend days and sleeping difficulties. Percentages mediated ranged from 2.84% to 21.16% for sleep duration on weekdays, from 0.66% to 4.49% for sleep duration on weekend days and from 24.60% to 34.13% for sleeping difficulties. This study explains partly how school pressure, screen-time and physical activity is related to mental wellbeing. Future interventions improving adolescents' mental wellbeing could target schoolwork, physical activity and screen-time, as these behaviours are directly and indirectly (through sleep) related to psychological distress.

12:00 - 12:15

## Differences in the long-term stress levels among preschool children

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<sup>2</sup>Folkhälsan Research Center, Finland

**Background:** Little is known about the objectively measured long-term stress of preschool-aged children and how it varies according to children's gender, birth order, socioeconomic background, and characteristics of children's behavior.

**Methods:** This research is part of the Finnish cross-sectional DAGIS study ([www.dagis.fi](http://www.dagis.fi)). The parents (n=809) reported (fall 2015–spring 2016) their educational level, family income, and factors related to their child (3–6-year-olds), and filled in a Very Short Form of the Children's Behavior Questionnaire. Children's (n=595) cortisol exposure was defined by the electrochemiluminescence immunoassay in 4-cm segment of hair sample from the scalp. Associations of predictors and their interactions to children's stress were tested with general linear model.

**Findings:** Higher cortisol levels were found among boys than girls ( $p < .001$ ) and, regardless of gender, among first born /only children compared to children latter in the birth order ( $p < .05$ ). Cortisol levels did not differ according to maternal/paternal educational level or family income. Maternal educational level interacted with gender so that girls had higher ( $p < .05$ ) and boys lower cortisol levels ( $p < .05$ ) if their mother had a higher educational level compared to those with less educated mothers. Cortisol levels did not differ according to children's behavior styles characterized by effortful control, surgency or negative affectivity.

**Discussion:** The results imply that children are unequally facing or complying with stressful situations depending on their gender, birth order, or maternal educational level. Future research should clarify which characteristics of children's social environment may account for these differences.

12:15 - 12:30

## Can we predict alcohol-related harms in adolescence?

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<sup>1</sup>Queen's University, Belfast, United Kingdom

<sup>2</sup>University of Liverpool, United Kingdom

**Background:** There is widespread agreement that the misuse of alcohol by adolescents, defined as drinking that causes physical, psychological and social problems, is responsible for a wide variety of both short-term and long-term harms. The aim of the present study was to examine the factors that predict the development of alcohol-related harms in a large sample of adolescents. This is an important area of research, as increasingly interventions are attempting to target the reduction of alcohol-related harm.

**Methods:** Participants formed a control group participating in a cluster Randomised Controlled Trial in 105 schools in Scotland and Northern Ireland. Four waves of data were collected at baseline, +12, +24 and +33 months. The mean age of participants at baseline was 12.6 years. Data were collected on alcohol-related harms, alcohol use indicators, demographic variables, three domains of self-efficacy, and parental rules on drinking.

**Findings:** Results clearly demonstrated that the best predictors of alcohol-related harm were the alcohol use variables (frequency of use and heavy episodic drinking). Other significant predictors of alcohol-related harm were; living in Scotland compared with Northern Ireland, having older siblings, reporting less healthy attitudes towards alcohol, reporting lower academic and emotional self-efficacy, reporting less strict parental rules on alcohol, and reporting higher social self-efficacy.

**Discussion:** As well as targeting drinking behaviours directly, interventions seeking to reduce alcohol-related harms might consider some of the other variables, reported herein as being significantly associated with the development of these harms.

# ROUNDTABLE: Making a difference: How health psychology influences health globally and what more can we do?

14:00 - 15:30

O'Flaherty

Vera Araujo Soares

## Making a difference: How health psychology influences health globally and what more can we do?

V.A. Soares<sup>1</sup>, J. Hart<sup>2</sup>, P.P. Walsh<sup>3</sup>, R. West<sup>4</sup>, S. Michie<sup>4</sup>, L. Byrne-Davis<sup>2</sup>, A. Baban<sup>5</sup>

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<sup>5</sup> Babes-Bolyai University, Romania

**Purpose:** Drawing on the experiences of an international panel who are influencing policy, practice and health, this panel discussion will set out the ways in which health psychology is making a difference to international health. Each panel member will briefly introduce the work they are doing and discuss how and why they think it is influencing changes in policy or practice. They will each propose ways in which health psychologists could work differently so that their work has more impact.

**Objectives:** 1) Sharing of experiences, across different countries and contexts, of having impact or finding it difficult to have impact; 2) Drawing together lessons learned from panel members and audience; 3) To motivate the audience to consider how they could apply their learnings to their own contexts; 4) Highlighting people with similar goals for influence to enable them to make contact with each other

**Rationale:** Globally, there are numerous issues which health psychology could be helping to address, including a worldwide focus on prevention of non-communicable diseases, the need to change health professional practice to transform workforce and the need to manage long term conditions more effectively. Despite this, in many countries, its contribution is hidden, in academic journals not available and understandable to non-academics and not able to reach its potential. Through the sharing of successes and difficulties, the round table will open the subject of influence up to debate, for delegates to learn about successes and take away ideas for how to increase the influence of health psychology in their own contexts.

# Individual differences: body image, behavior and health

14:00 - 15:30

Kirwan

Simon Bacon

14:00 - 14:15

## A social identity model of weight stigma resistance and psychological wellbeing in higher-weight individuals

A. Meadows<sup>1</sup>, S. Higgs<sup>1</sup>

<sup>1</sup>University of Birmingham, United Kingdom

**Background:** Experiencing and internalising weight predict poorer physical and psychological health in higher-weight individuals. It is unknown why some individuals internalise societal stigma, whereas others are indifferent or resist devaluation. Using a social-identity framework, the present study explored predictors of stigma response, and impact of stigma resistance on psychological wellbeing.

**Methods:** 931 higher-weight individuals (BMI 25.0–95.0 kg/m<sup>2</sup>, M = 40.2 (10.8)) completed measures of perceived discrimination, weight-related self-devaluation, weight-related distress, stigma resistance, global self-esteem, components of identification with the group “Fat”, perceived legitimacy of weight stigma, and weight controllability beliefs. Decision tree analysis was conducted to determine predictors of stigma response.

**Findings:** Controlling for demographics, BMI, and levels of perceived stigma, stigma resistance was associated with higher global self-esteem and lower weight-related self-devaluation and distress, explaining additional 8.2%, 22.7%, and 32.6% variance, respectively. Group investment was the main determinant of stigma resistance,  $\chi^2(6) = 275.1$ , adjusted  $p < .001$ . Scores above a cut-off just below the neutral midpoint of the scale captured 59.7% resisters and only 13.8% internalisers and 5.7% stigma-indifferent participants. However, even at lower levels of investment, low perceived legitimacy predicted resistance classification. Low investment plus low perceived stigma identified two-thirds of the indifferent group, whereas low investment plus greater stigma experience predicted internalisation. Weight controllability beliefs and self-defining as “fat” did not contribute to predictive accuracy of the model.

**Discussion:** Fostering stigma resistance may reduce psychological harms associated with weight stigma. Social justice-based interventions may increase resistance, even in individuals uncomfortable with group membership.



14:15 - 14:30

## Sex-differences in bariatric surgery induced changes to depressive symptoms

S. Bacon<sup>1,2</sup>, C. Julien<sup>2,3</sup>, L.A. Mercier<sup>2,3</sup>, R. Woods<sup>1,2</sup>, C. Gemme<sup>2,3</sup>, P. Garneau<sup>2</sup>, H. Atlas<sup>2</sup>, R. Denis<sup>2</sup>, R. Pescarus<sup>2</sup>, K. Lavoie<sup>2,3</sup>

<sup>1</sup>Concordia University, Canada

<sup>2</sup>CIUSSS-NIM, Canada

<sup>3</sup>Université du Québec à Montréal, Canada

**Background:** Though bariatric surgery (BS) improves weight and metabolic outcomes, its impact of psychological health is less clear. Though quality of life may improve, there seem to be increases in depression, suicide, and self-harm behaviour post-surgery. However, in spite of the known sex-differences in depression prevalence, there is limited data on the sex-specific impact of BS on depressive symptoms and suicidal ideation.

**Methods:** 31 BS patients (mean age=48.8 yrs; 7 men 24 women; mean BMI=50.6 kg/m<sup>2</sup>) were recruited as part of the REBORN (Research on Bariatric care for Obesity tReatmeNt) study. Data were collected 6 months pre and 6 months post-surgery. GLMs assessed associations between post-surgical change in depression (Beck Depression Inventory-II) and sex adjusting for baseline age, weight, BDI-II score, and antidepressant use.

**Results:** Mean (SD) BDI change was -3.1 (6.2) units. There was a significant effect of sex on BDI change ( $F=6.28$ ,  $p=.019$ ) such that women reduced their BDI scores (-3.7 (1.2) units), whereas men increased their depressive symptoms (+3.1 (2.3) units). There wasn't an effect of sex on suicidal ideation (BDI-9) change ( $F=2.16$ ,  $p=.155$ : women=-0.21 (0.11), men=+0.19 (0.23)).

**Conclusion:** In the short-term, BS is associated with a decrease in depressive symptoms in women but an increase in symptoms for men. Given the potential negative consequences of depression on self-management and future chronic disease risk, it is important to further explore the nature and impact of this increase. Ultimately, sex-specific interventions will need to be developed to reduce the impact of BS on depressive symptoms, especially in men.

14:30 - 14:45

## Visual attention for palatable food cues on tv predicts unhealthy food intake: an eye-tracking study

M. Alblas<sup>1</sup>, S. Mollen<sup>1</sup>, M. Fransen<sup>1</sup>, B. van den Putte<sup>1</sup>

<sup>1</sup>University of Amsterdam, Netherlands

**Background:** Food-related TV content can increase unhealthy food consumption, but there is little knowledge on the mechanisms and moderators explaining this relation. The current study investigates whether eating restraint is associated with unhealthy food intake after exposure to a TV show with palatable food cues, and whether this effect is mediated by visual attention for these cues.

**Methods:** In a lab setting, restrained (N=18) and unrestrained eaters (N=22, data collection is still ongoing) watched a Dutch TV show containing palatable food cues. Using the SMI RED eye-tracker, visual attention was measured with fixation duration and the number of fixations on the food cues. Unhealthy food intake was assessed afterwards in a taste test. The mediation model was tested using PROCESS.

**Findings:** Eating restraint was not significantly related to fixation duration,  $b=-1.39$ ,  $t=-0.84$ ,  $p=.410$ , the number of fixations,  $b=-2.24$ ,  $t=-0.36$ ,  $p=.723$ , or unhealthy food intake  $b=-9.58$ ,  $t=-1.58$ ,  $p=.124$ , and there was no mediation of fixation duration,  $b=-1.83$ ,  $SE=2.32$ , BC 95%CI[-7.85,1.73] or the number of fixations,  $b=-0.79$ ,  $SE=2.29$ , BC 95%CI[-5.97,3.68]. However, independent of eating restraint, unhealthy food intake was predicted by fixation duration,  $b=1.32$ ,  $t=2.07$ ,  $p=.047$ , and the number of fixations,  $b=0.35$ ,  $t=2.08$ ,  $p=.046$ .

**Discussion:** Attention for food cues on TV predicts how much unhealthy food people subsequently eat. If the same results are found with the complete data set (expected N=80), we can further investigate for whom this effect is particularly relevant, and whether interventions (e.g., attentional bias training) can be effective in counteracting the influence of food cues on TV.

14:45 - 15:00

## The moderating effects of life values on young males' body image satisfaction and health-related behaviour

L. Ku<sup>1</sup>

<sup>1</sup>De Montfort University, United Kingdom

The current research examined the moderating effect of intrinsic life values on young men's body image (dis)satisfaction, which in turn affects their health-related behaviour such as dieting and over-exercising. Study 1 (N=334) surveyed young males aged between 18 and 25 years (M=21.45, SD=1.89), and found that body image dissatisfaction was positively correlated with the frequency of fitness and fashion magazine reading, emotional eating and over-exercising. Intrinsic life values moderated these relationships in that more intrinsically orientated participants reported lower level of body image dissatisfaction, and lesser emotional eating and over-exercising tendencies. Study 2 experimentally manipulated intrinsic life values among a group of adolescent boys (M=16.49, SD=.64). Compared to the control group (n=50) who did not receive any life values manipulation, the experimental group (n=40) reported higher satisfaction with their body image. Study 3 further examined the causal effects of media exposure and intrinsic life values on young men's body (dis)satisfaction by adopting a 2 (muscular images vs non-muscular images) x 2 (intrinsic values vs. no values) experimental design. Results showed that compared to the control group that viewed images of non-muscular male models (i.e., muscular images + no-values condition; n=40), viewing muscular male models in the media (muscular + no-values condition; n=41) significantly reduced participants' satisfaction with their body. This effect, however, was reduced when intrinsic values were primed (muscular + intrinsic values condition, n=43). The implications of intrinsic life values on the relationship between young men's body (dis)satisfaction and potential health-related behaviour are discussed.

15:00 - 15:15

## Determinants of lapse and relapse in physical activity and dietary behaviors: a concept mapping study

E. Roordink<sup>1</sup>, I. Steenhuis<sup>1</sup>, W. Kroeze<sup>1</sup>, M. van Stralen<sup>1</sup>

<sup>1</sup>Department of Health Sciences, Faculty of Science, Vrije Universiteit Amsterdam, Amsterdam Public Health research institute, Netherlands

**Background:** To uphold the health benefits of regular physical activity and a healthy diet, it is crucial that people do not relapse into unhealthy habits. To prevent relapse, insights into determinants of relapse are needed. Currently the perspectives of practitioners (e.g. dietitians, weight loss counselors and lifestyle coaches) on potential determinants of relapse are underexplored. Hence, we aim to identify determinants of relapse in dietary behaviors and physical activity by synthesizing perspectives from practitioners using concept mapping.

**Methods:** Concept mapping is a participatory approach designed to integrate views from the target population, to produce a visual display of the relationships between ideas. We comprised 5 groups of 7-10 practitioners, who participated in two sessions: 1) an online brainstorm on potential determinants of relapse, and 2) a face-to-face session in which each participant sorted and ranked the determinants. We conducted multidimensional scaling and hierarchical cluster analysis, wherein concept maps were created that graphically presented the relation between determinants.

**Results:** In total 39 practitioners (100% female, Mage: 44.7 years, 57% weight loss counselor) participated, and saturation was achieved. In multiple groups, resilience, life imbalance, social influences, and internal and external barriers were identified as determinants of relapse in dietary behaviors and physical activity.

**Discussion:** Our study confirmed knowledge from health behavior models (e.g. Marlatt's cognitive behavioral model) and existing literature, but also identified new concepts (e.g. resilience). These findings contribute to current health behavior models and the development of a new theoretical framework regarding relapse prevention in physical activity and dietary behaviors.

15:15 - 15:30

## Examination of the acquired preparedness model: affect-related expectancies mediate effects of impulsivity on smoking addiction

Y. Süsen<sup>1</sup>, Ö. Yalçınkaya Alkar<sup>1</sup>

<sup>1</sup>Ankara Yıldırım Beyazıt University, Turkey

**Background:** The Acquired Preparedness Model (APM) has suggested the idea that the association between personality traits (e.g., impulsivity) and substance use are mediated by expectancies (Bolles, Earleywine, & Gordis, 2014). Within the theoretical framework of the APM, affect-related smoking outcome expectancies were suggested to be mediators of the relationship between negative urgency (a subdimension of impulsivity) and smoking dependence in the present study.

**Method:** 305 volunteer smokers participated in the present study. Their inclusion to study was determined according to their age ( $\geq 18$ ) and their smoking status.

**Findings:** Mediation model was tested using Hayes's multiple mediation analysis (2013). Findings demonstrated that negative affect reduction and boredom reduction expectancies mediated the relation between urgency and smoking addiction. The smokers with higher levels of urgency had higher negative affect reduction expectancy from their smoking behavior ( $a_1 = .18, p < .005$ ), which in turn led higher smoking dependence ( $b_1 = .05, p < .05$ ). Furthermore, higher levels of urgency led smokers to higher boredom reduction expectancy ( $a_2 = .18, p < .001$ ), which in turn increased their dependence to smoking ( $b_2 = .09, p < .01$ ).

**Discussion:** The results of this study extended the empirical evidence supporting the APM model by showing the link between negative urgency, affect-related smoking outcome expectancies, and smoking addiction. Also, to establish a direct or combined link between these expectancies and smoking dependence seems important for taking further steps in smoking cessation programs such as aiming to modify these outcome expectancies to reduce tobacco use.

# Interventions for Pain, Fatigue, and Arthritis

14:00 - 15:30

Larmor

Emma Godfrey

14:00 - 14:15

## An acceptance & commitment group intervention for primary headache sufferers- a randomized wait-list controlled Trial

V. Vasiliou<sup>1</sup>, M. Karekla<sup>1</sup>, E. Karademas<sup>2</sup>, G. Christou<sup>3</sup>, S. Papacostas<sup>3</sup>

<sup>1</sup>University of Cyprus, Cyprus

<sup>2</sup>University of Crete, Greece

<sup>3</sup>Cyprus Institute of Neurology and Genetics, Cyprus

**Background:** The main behavioral treatment suggestion today for headache management is the prevention of headaches via avoidance of headache triggers. This practice has very little empirical support, and attempts to avoid triggers result in increasing trigger potency, restricting lifestyle, decreasing internal locus of control, and exacerbating pain perception. New treatment approaches (Acceptance and Commitment Therapy; ACT) emphasize acceptance and valued living as alternatives to avoidance. Though APA characterizes ACT as an empirically supported treatment for chronic pain, there is limited evidence for its effectiveness for head pain.

**Methods:** This study examined in a Randomized Controlled Trial (RCT) whether an ACT-based intervention for headache sufferers, added to Medical Treatment as Usual, decreased disability and improved the quality of life, compared to only Wait List Control (WL). 94 headache sufferers (90% migraines; 9.1 % tension-type headaches) mostly women (84%) were randomized to each group. Headache severity, disability, quality of life (primary outcome), medical utilization, psychological distress (secondary outcome) and ACT treatment processes were assessed before/after treatment-end, and at 3, 6 and 12-month follow-up.

**Findings:** Substantial improvements were noted in favor of ACT compared to the WL group on primary outcomes and distress. At 12-month follow-up, ACT resulted in significant effects of time for disability, quality of life, pain severity, medical utilization, and depression. Also, improvements in favor of the ACT group across time were noted for pain acceptance, avoidance of pain, cognitive fusion, and value obstructions.

**Discussion:** Findings offer new evidence for the efficacy of ACT in the management of head pain.

14:15 - 14:30

## Physiotherapy informed by acceptance and commitment therapy (PACT) versus usual physiotherapy for persistent back pain

E. Godfrey<sup>1</sup>, V. Wileman<sup>2</sup>, M. Galea Holmes<sup>2</sup>, S. Norton<sup>2</sup>, D. Critchley<sup>3</sup>, L. McCracken<sup>2</sup>

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<sup>3</sup>Department of Physiotherapy, School of Population Health & Environmental Sciences, Faculty of Life Sciences and Medicine, King's College London, United Kingdom

**Background:** Chronic low back pain (CLBP) is a common disabling condition. Many patients receive physiotherapy that is moderately effective. Acceptance and Commitment Therapy (ACT) has a good evidence base but has not been delivered by physiotherapists. This randomised controlled trial aimed to test the efficacy of physiotherapy informed by ACT (PACT) against usual care (UC) physiotherapy.

**Methods:** Phase II trial recruited from physiotherapy clinics in NHS hospitals. Inclusion criteria: non-specific CLBP  $\geq 12$  weeks,  $\geq 3$  points on Roland-Morris Disability Questionnaire (RMDQ). Primary outcome was functioning, assessed with RMDQ at 3 months. Secondary outcomes: pain, mood, quality of life, satisfaction, acceptance and committed action. Estimates of treatment effect at follow-up used linear-mixed models following the intention-to-treat principle.

**Findings:** 248 participants (59% female, age=48) with CLBP recruited. 219 (88.3%) completed measures at follow-up. PACT participants had significantly better functioning at 3 months compared to UC (1.07,  $p=0.037$ ,  $d=0.2$ ). They had clinically important reductions of  $\geq 3$  points on the RMDQ and were more satisfied with treatment. At 12 months, there were no significant differences between groups for RMDQ scores (mean difference -0.38,  $p=0.52$ ) or other outcomes. PACT was feasible and delivered with high (85%) treatment fidelity.

**Discussion:** PACT improved functioning in the short but not long term compared to UC physiotherapy. PACT was a feasible and credible treatment for patients with CLBP. The model of delivery enabled physiotherapists to incorporate psychological techniques successfully. PACT may inform the delivery of physiotherapy services for CLBP, with potential benefits for patients and the NHS.



14:30 - 14:45

## The Pain Course: An internet-delivered intervention - randomized controlled trial with adults living in Ireland

C. Navin<sup>1</sup>, B.F. Dear<sup>2</sup>, B. Slattery<sup>1</sup>, M. Pilch<sup>1</sup>, S. Haugh<sup>1</sup>, L. O Connor<sup>1</sup>, B. Malone<sup>1</sup>, C. Perez<sup>1</sup>, J. Egan<sup>1</sup>, B. McGuire<sup>1</sup>

<sup>1</sup>NUI Galway, Ireland

<sup>2</sup>eCentreClinic, Department of Psychology, MacQuarie University, Sydney., Australia

**Background:** Despite demonstrated efficacy of psychological interventions, predominantly cognitive behaviour therapy (CBT), in the treatment of people with chronic pain, access to these effective, evidence-based interventions is limited. Internet-based CBT (iCBT) has emerged as an innovative approach to address these treatment barriers. An internet-delivered psychological pain management programme, the Pain Course, was developed and empirically tested in Australia. The aim of the current study was to evaluate the efficacy of this clinician-guided iCBT programme for adults with chronic pain living in Ireland.

**Methods:** A total of 133 individuals were randomly assigned to either a Treatment Group or wait-list Control Group. The Pain Course comprised 5 internet-delivered lessons, released sequentially over an 8-week period. The programme also included homework tasks, additional resources, weekly clinician contact via e-mail or telephone, and automated e-mails. The primary outcome was pain-related disability as measured by the Roland Morris Disability Questionnaire (RMDQ). The secondary outcomes were depression, anxiety, average pain, and treatment satisfaction. The online measurements were conducted pre- and post-treatment, and at 3-months follow-up.

**Results:** All 5 lessons were completed by 80% of the Treatment Group. Improvements were significantly greater for Treatment Group participants compared to the Control Group in levels of disability, anxiety, depression, and average pain levels at post-treatment. Over 80% of participants rated the programme as highly acceptable. Clinician contact per participant was 81.29 minutes (SD = 2.36).

**Conclusion:** The findings of the current study add to the existing literature and are broadly in line with previous trials of the Pain Course.

14:45 - 15:00

## Does motivation to change unhealthy behaviour differs according to disease? Comparing cardiac and musculoskeletal patients.

L. Šinkariova<sup>1</sup>, R. Petrolienė<sup>1</sup>, L. Alčiauskaitė<sup>1</sup>, J. Misiūnienė<sup>1</sup>, L. Zajančauskaitė-Staskevičienė<sup>1</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

**Background:** The objective of this investigation is to compare ischemic heart disease and musculoskeletal disease patients' motivation to change unhealthy behaviour and its changes during rehabilitation according to the effect of motivational interviewing sessions.

**Methods:** A quasi experiment design was employed for this study. Patients were recruited in Abromiskes rehabilitation hospital during the period of 2013-2016. Study's sample consisted of 362 ischemic heart disease patients and 134 musculoskeletal patients. All of them were systematically randomised to experimental or control groups. Motivational interviewing sessions were used as an intervention for patients in experimental group seeking to help them to change unhealthy behaviour. Readiness to Change Questionnaire was used as a measure of motivation to change smoking, alcohol consumption, physical inactivity and unhealthy diet at the beginning and at the end of rehabilitation.

**Findings:** Pearson chi-square test showed that motivational interviewing helps to strengthen motivation to change alcohol consumption ( $p = 0.033$ ), physical inactivity ( $p = 0.008$ ), diet ( $p = 0.035$ ) but not smoking ( $p = 0,107$ ) for ischemic heart disease patients. Moreover, Pearson chi-square test showed that motivational interviewing makes no impact for musculoskeletal patients' motivation to change health behaviour ( $p > 0.05$ ).

**Discussion:** In conclusion motivational interviewing helps to change health behaviour for ischemic heart disease patients but not for musculoskeletal. It shows that there has to be different rehabilitation program according to the disease and not only in physical way but in psychological as well.

Research was supported by the Research Council of Lithuania under Grant number MIP-081/2014.

# Families and caregivers facing chronic illness

14:00 - 15:30

Dillon

Laura Koehly

14:00 - 14:15

## Communal coping as a network process: emotional support in families affected by Lynch syndrome

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**Background:** Families facing inherited diseases rely on each other for support to cope with disease threat, reflecting communal coping. We operationalize communal coping by the observed pattern of supportive relationships between family members. Previous studies focused on support resources aggregated to the individual rather than on the family network. Consequently, there is a clear mismatch between the network-level processes of communal coping and the measurement of individual outcomes.

**Methods:** Using a social network approach, 74 individuals from 6 families with Lynch syndrome, an inherited cancer syndrome, enumerated network members indicating who provided support. Employing exponential random graph models, we test hypotheses about the pattern of emotional support exchanges.

**Findings:** Reciprocity of support is less likely to occur when two individuals share the same testing status ( $b=-2.38$ ,  $p<.001$ ), and more likely to occur between those with different testing statuses ( $b=2.62$ ,  $p<.001$ ). Together with positive non-reciprocal mixing effects ( $b=1.77$  to  $2.00$ ,  $ps<.01$ ), members not sharing biological risk were involved in more emotional support ties than those at risk. Moreover, network members outside the family network represent an important coping resource; those with more outside support have increasing propensity to provide support to others ( $b=0.22$ ,  $p<.001$ ) and decreasing reliance upon others within the family network for their support ( $b=-0.47$ ,  $p<.001$ ).

**Discussion:** Communal coping mechanisms involve a combination of network processes from internal and external sources and depend on individual testing-status. Thus, the processes giving rise to support systems through communal coping in families affected by Lynch syndrome are more interpersonal than personal.

14:15 - 14:30

## How do I talk about breast cancer with my parents?

K.A. Černíková<sup>1</sup>, L. Kluzova Kracmarova<sup>2</sup>

<sup>1</sup>Olomouc University Social Health Institute, Czech Republic

<sup>2</sup>Palacky University in Olomouc, Czech Republic

**Background:** The role of family and social support has been recognised as an important part of coping with disease. However, disclosing cancer diagnosis to family members has been identified to be difficult for many patients. Previous studies have been mostly describing the process of disclosure to children and spouse. This study aimed to identify family disclosure (adult child–parent interaction) patterns among breast cancer patients.

**Methods:** A qualitative research design was used. A maximum variation sample of 54 women across the Czech Republic was recruited through patient support groups, online advertising and from general practices. Interviews were video and/or tape recorded and transcribed verbatim. Data from the interviews was first grouped into broad categories, followed by a more detailed thematic analysis and interpretation.

**Findings:** Findings from this study have identified an important role of family support and possible reservations in disclosing the diagnosis. Women described emotional relief when disclosing diagnosis to family. However, most of them have been afraid of the reaction and coping mechanism of their parents. Therefore, some of them decided do not disclose their diagnosis until it has had visible impact (hair loss etc.).

**Discussion:** Disclosure of the diagnosis is complex process. Also, it is very stressful event both for patients and family members. The results from the study suggest that researchers and clinicians need to be family-focused as cancer affects the whole family of an adult patient.

14:30 - 14:45

## Family members of chronic kidney disease patients: Who are they, what is their illness perception?

L. Montalescot<sup>1</sup>, K. Legrand<sup>2</sup>, G. Dorard<sup>1</sup>, C. Loos-Ayav<sup>2</sup>, S. Briançon<sup>2</sup>, C. Combe<sup>3,4</sup>, B. Stengel<sup>5,6</sup>, A. Untas<sup>1</sup>

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<sup>6</sup>Paris Sud Univ, UMRS 1018, France

**Background:** Literature on chronic kidney disease (CKD) before the terminal stage is scarce. Very few studies have been conducted on family members' adjustment to advanced-stage CKD. The aim of this study was to describe them, their illness perception and mental health at the first stage of a longitudinal research on patients living with CKD.

**Methods:** Patients with advanced-stage CKD participating in the cohort CKD-REIN (N=3000) were or will be proposed to include at least one relative. So far, 184 relatives were included. Family members' self-perceived depression, anxiety, assertiveness and perception of CKD were measured. Descriptive and regression analyses were performed.

**Findings:** Among participants, 78% were women, 70% were partners and 15% children. 32% were anxious and 10% were depressed. 45% thought the patients' illness would not last "forever". 22% did not feel CKD affected their life. Only 30% reported they understood the illness. Age predicted positively the level of depression whereas assertiveness and feeling they understood CKD predicted it negatively. Feeling CKD affected their life predicted their level of anxiety.

**Discussion:** This study will allow us to better understand who the family members participating in CKD-REIN are. Indeed, most participants do not understand their relatives' illness while it seems to decrease their level of depression. This observation highlights the need for specific interventions and education for family members who need more information. Moreover, these results will have to be seen in light of the patients'.

14:45 - 15:00

## The effect of providing end-of-life care on family caregivers' wellbeing: a census survey

C. Rowland<sup>1</sup>, B. van den Berg<sup>2</sup>, E. Batistatou<sup>1</sup>, S. Cotterill<sup>1</sup>, B. Hanratty<sup>3</sup>, G. Grande<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>Macquarie University, Australia

<sup>3</sup>University of Newcastle, United Kingdom

**Background:** Family caregivers provide vital end-of-life care, often in detriment to their own wellbeing. It is estimated that this care saves the UK £219million annually therefore safeguarding carer wellbeing should be a priority. We investigated the contribution of caregivers to family members at end-of-life and the impact this has on their wellbeing. Our data includes, for the first time in a national survey, detailed financial and task-time contributions to care.

**Design:** A retrospective, post-bereavement census survey of all cancer deaths in England over a two-week period was conducted. Data collected included: demographics/socioeconomic status, patient symptoms, caregiving hours and tasks, out-of-pocket expenses, respite opportunities, and care from other sources (informal social support and formal services). Wellbeing was conceptualised as psychological distress (GHQ-12) and general health (EQ-VAS). Drawing on evidence in the literature, models explaining wellbeing were tested using multiple linear regressions.

**Findings:** N=1504 carers responded (28.5% response rate) and reported giving a median 69.30 hours of care/week in the last three months of life. Psychological distress above clinical thresholds was 5-7 times higher in our sample than population reference data. Models explained 23% (GHQ-12; n=388) and 12% (EQ-VAS; n=771) of variance. Main predictors of poorer wellbeing included the patient's psychological symptoms, carer's gender (female) and greater hours of caregiving. Maintaining other activities and relaxation contributed to better wellbeing.

**Discussion:** The high incidence of psychological distress indicates an unexplored public health issue. This highlights the importance of assessing carer risk/ resilience factors and providing carer interventions such as respite care.

15:00 - 15:15

## Is a Chronic Illness Diagnosis a Teachable Moment to Quit Smoking for Patients and Spouses?

D. Ayuningtyas<sup>1</sup>, M. Hagedoorn<sup>1</sup>, M. Tuinman<sup>1</sup>

<sup>1</sup>University of Groningen, Netherlands

**Background:** This study examined whether smokers with a chronic illness were more likely to quit smoking than their healthy counterparts, which could be defined as a teachable moment. The influence of spouse's smoking status and whether the teachable moment extended to smoking spouses were also examined.

**Methods:** Baseline data from the LifeLines Cohort Study, collected in 2006-2013 in the northern part of The Netherlands, were used. Participants with a smoking history were categorised into either a patient or comparison group (n = 8,468). Chi-square and logistic regressions were used to study the relationship between health status and spouse's smoking status on both the participant's and their spouse's smoking behaviour. Education level and pack years were included as covariates.

**Findings:** A chronic illness (odds ratio [OR] = 1.26) was predictive of smoking cessation, but the spouses smoking status was a stronger predictor (ex-smoker spouse OR = 4.65, never smoker spouse OR = 3.40). A teachable moment appeared to occur in a minority of the patients, and individuals' health status was not predictive of their spouses' cessation rate.

**Discussion:** Considering the effect of spouses is stronger than a chronic illness, medical professionals might consider focusing on involving the spouses in interventions besides using the diagnosis as a teachable moment.



# Users' perspectives in e/mHealth

15:30 - 17:00

Hanna Kampling

15:30 - 17:00

## The experience of using a user-centred design approach in a third-level setting

S. Dick<sup>1</sup>, D. Organ<sup>1</sup>, S. Dockray<sup>1</sup>, E. Whelan<sup>1</sup>, C. Hurley<sup>1</sup>, C. Linehan<sup>1</sup>, M. Davoren<sup>1,2</sup>, C. Heavin<sup>1</sup>, M. Byrne<sup>1</sup>

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<sup>2</sup>The Sexual Health Centre Ltd., Ireland

Avoidance, disinterest, and user-apathy have raised doubts about the potential for digital behavioural change interventions (DCBIs) to have a meaningful impact. This study will evaluate the impact of a user-centred design (UCD) process on user experience of a DCBI that seeks to reduce harm from substance use in third-level students.

The DCBI will be tested with small student groups in exploratory and evaluative workshops. The researchers will describe the participatory methodologies employed, and the decision process for the design of the DCBI, and will subsequently evaluate the extent to which the UCD process influenced the effectiveness of the DCBI.

The study will provide a robust, detailed, and actionable process for a UCD approach to the development of a DCBI targeting substance use in third-level students. By describing the impact of various participatory methodologies on design decisions, we will produce new insights into how engaging user experiences can be created with DCBIs, and provide an evaluation of how user participation can enhance the behaviour change impact of mobile health technologies.

To date, 7 exploratory workshops have been carried out with 28 students.

Despite the capacity to engage users in real-world settings being a critical design consideration, there has been limited analysis of how researchers can employ insights from the UCD process to create engaging user experiences with DCBIs. If researchers are to design technologies which can meet the ambitious aims of DCBIs, then studies identifying the specific participatory strategies that maximise the value of user involvement are critical.

15:30 - 17:00

## The psychological experiences of women who survived HELLP syndrome as constructed online

M. Andipatin-Botha<sup>1</sup>, J.L. Cupido<sup>1</sup>

<sup>1</sup>University, South Africa

**Background:** The primary aim of this paper is to provide an overview of how women who have had HELLP (Haemolysis, Elevated Liver Enzymes, Low Platelets) Syndrome during their pregnancies used the internet and social media to express health concerns, seek advice and vent when challenges became too overwhelming. HELLP syndrome is considered one of the most devastating complications in pregnancy and can be potentially fatal to mother and baby.

**Methods:** An internet-mediated method was used to collect data for a period of one month from an online platform, which had 3720 members. The data consisted of 87 postings and 228 interactive postings (these were the reactions and responses to the posts). A group of women who had experienced HELLP syndrome constructed the content of their postings based on their personal experiences of HELLP Syndrome. A thematic decomposition analysis was conducted on the total number of postings.

**Findings:** The main themes that emerged from the analysis were mourning and loss, memorialization of the loss, experiences of medical staff, intuition, religion and spirituality and social support found online.

**Discussion:** This paper demonstrates that participants experienced this online community as a place of safety, a place where they feel understood and a place where they find solace. Postings on these platforms are often uncensored thus providing researchers with a window of opportunity when attempting to understand challenging health issues.

15:30 - 17:00

## Factors associated with cyberbullying perpetration and - victimization: a cross-sectional study among Dutch adolescents

V. Knapen<sup>1</sup>, M. Aarts<sup>2</sup>, F. Schneider<sup>1</sup>

<sup>1</sup>CAPHRI / Department of Health Promotion, Maastricht University, Netherlands

<sup>2</sup>Department of Research, Regional Public Health Centre Limburg-Noord, Netherlands

**Background:** Cyberbullying is a harmful behavioural way of using technology, with a definite impact on health and wellbeing of victims and perpetrators. This study aimed to examine factors associated with cyberbullying perpetration and victimisation.

**Methods:** A cross-sectional study was performed within 15.104 Dutch adolescents, aged 13 to 16 years old. Using a written survey administered at secondary school, information was gathered for a broad range of factors ranging from demographics, to traditional bullying, psychosocial, behavioural and family-related factors. Associations of the factors with cyberbullying perpetration and victimisation were analysed using Chi-square tests, T-tests, and logistic regression analysis.

**Findings:** 5.5% of all adolescents reported being a perpetrator of cyberbullying, whereas 4.1% reported being a victim of this. Moreover, 56.7% of traditional perpetrators were cyber perpetrators and 57.7% of traditional victims were cyber victims. The logistic regression analysis indicated that perpetration was strongly associated with being from non-Western origins, traditional bullying perpetration and victimisation, and problematic social media use. Victimisation, on the other hand, was strongly associated with a lower age and traditional bullying perpetration and victimisation. Factors such as the occurrence of emotional problems, level of assertiveness, family composition and perceived social support were not associated with cyberbullying victims or perpetrators.

**Discussion:** These results shed light on the factors related to cyberbullying. Based on the results of this study, awareness can be increased and screening methods can be improved in order to identify cyberbullying behaviours. With this information, interventions and policies creating a supportive climate for cyberbullying prevention can be created.

15:30 - 17:00

## Social media tools for health behaviour change interventions: How effective are they and why?

D. Taut<sup>1</sup>, M. Penta<sup>1</sup>, S. Pintea<sup>1</sup>, A. Baban<sup>1</sup>

<sup>1</sup>Babes-Bolyai University, Romania

**Background:** Social media tools (SMTs) are becoming a popular vehicle of health behaviour change interventions. Despite their rapid growth in notoriety, little is known about the effectiveness, mechanisms of actions and the pitfalls of using SMTs in such interventions. The current study aimed to conduct a meta-analysis with a systematic review, and pitted together RCTS of SMTs interventions on health behaviour change (physical activity, weight loss, smoking and alcohol intake), in the general population, alone or as part of larger interventions, in order to assess the magnitude of effects on: a) actual behaviour, b) participants' knowledge and skills, and c) participants' satisfaction with the intervention.

**Methods:** We investigated potential moderators of these effects, by taking into consideration the length of interventions, other programme components, the type of SMTs (commercial and non-commercial), the type of target behaviour, and the quality of the RCTS. We excluded correlation studies and research carried with children populations or those having medical conditions.

**Findings:** Our preliminary analyses on 36 studies showed that overall, the quality of RCTS was low, with underpowered sample sizes. The majority of low quality studies indicated positive effects of SMTs on behaviour (low to medium effect sizes), whereas this effect was not evident in high quality RCTS.

**Discussion:** Well conducted RCTS that incorporate SMTs in theory-driven, well designed and adequately powered interventions should be prioritized before integrating SMTs in actual health promotion interventions.

15:30 - 17:00

## The electronic Clinical Reasoning Skills Educational Simulation Tool (eCREST): improving medical students' clinical reasoning

A. Kassianos<sup>1</sup>, J. Sheringham<sup>1</sup>, R. Plackett<sup>1</sup>, P. Schartau<sup>1</sup>, J. Hopwood<sup>1</sup>, N. Kay<sup>1</sup>, S. Mylan<sup>1</sup>, W. Hamilton<sup>2</sup>, S. Duffy<sup>3</sup>, R. Raine<sup>1</sup>

<sup>1</sup>UCL, United Kingdom

<sup>2</sup>University of Exeter, United Kingdom

<sup>3</sup>Queen Mary University of London, United Kingdom

**Background:** Flaws in clinical reasoning – thought processes required to identify likely diagnoses, formulate appropriate questions and reach decisions during patient consultations - are important causes of diagnostic errors amongst qualified doctors. It is therefore recommended that clinical reasoning skills be integrated into medical education.

Online patient simulations enable students to practise such skills in a safe environment. The aim of this study is to develop and evaluate a theory-informed online simulation approach to teaching clinical reasoning in medical schools, applied to the diagnosis and management of common respiratory symptoms in primary care.

**Methods:** eCREST (electronic Clinical Reasoning Skills Educational Simulation Tool) seeks to address cognitive biases which can impair clinical reasoning. Interactive 'patient' simulated cases were developed where students 'ask' 'patients' questions to form their differential diagnosis and receive responses as videos of patient-actors or text giving test results and previous consultation notes. Informed by experiential learning theory and iterative hypothesis testing, it prompts students to explain the information elicited about patients and their diagnostic hypotheses. A feasibility trial was conducted in two medical schools measuring participation and self-reported learning.

**Findings:** 84 final-year students registered for eCREST, of which 46 (55%) completed all cases. Of those, 65% agreed it helped them learn clinical reasoning applicable to clinical work. Students also reported they formed new strategies for asking questions and considered more differential diagnoses than previously.

**Discussion:** Early evaluation suggests eCREST was acceptable and might improve clinical reasoning in medical students that ultimately could reduce diagnostic errors in primary care.

15:30 - 17:00

## OREST – Developing an Online Screening for the Need of Medical Rehabilitation: Practicability & Acceptance

H. Kampling<sup>1</sup>, M. Schlöffel<sup>1</sup>, H. Pollmann<sup>2</sup>, O. Mittag<sup>1</sup>

<sup>1</sup>Medical Center – University of Freiburg, Germany

<sup>2</sup>Clinic Niederrhein, Bad Neuenahr, Germany

**Background:** Surveys show (severe) limitations in both work ability and social participation in the German work force. Nonetheless, there is no proactive screening for potential rehabilitation need; people have to file applications for medical rehabilitation on their own initiative. Hence, we intended to develop and evaluate an online screening for the need of medical rehabilitation or preventive interventions, and if necessary, to motivate people to apply for them by offering comprehensive information (=website).

**Methods:** Based on two instruments (WAI/IMET), we developed a screening which was first pilot tested, and subsequently, tested for its practicability and acceptance. As part of a randomized controlled trial including 8,000 participants, the intervention group (N=4,000) received information on the website and individualized, pseudonymized login credentials for the online screening (control group: no information). After 22 months, we will receive information such as approved rehabilitation applications (main outcome), sickness days, or disability pensions.

**Findings:** Results of the pilot-test suggest three main outcomes: need for rehabilitation, need for prevention, or no intervention need. The screening was designed to be imbedded in a comprehensive website with general information on rehabilitation (eg, applying procedures, barriers). After completing the screening, participants are informed about their rehabilitation need, and receive accompanying information for the general practitioner to help the insured person to address the matter of rehabilitation.

**Discussion:** Web-based screenings are cost-efficient, and easily accessible. Facing potential shortages in the care system as well as an unattended/undetected need for rehabilitation, online screenings might help to identify the need for medical rehabilitation.

15:30 - 17:00

## An evidence, theory and person-based approach to intervention planning: A digital intervention for cancer survivors

K. Bradbury<sup>1</sup>, M. Steele<sup>1</sup>, T. Corbett<sup>1</sup>, A. Krusche<sup>1</sup>, P. Little<sup>1</sup>, L. Yardley<sup>1,2</sup>

<sup>1</sup>University of Southampton, United Kingdom

<sup>2</sup>University of Bristol, United Kingdom

**Background:** Low quality of life is common in cancer survivors. This research aimed to plan a digital intervention to improve quality of life and prevent secondary cancers in cancer survivors, adopting an evidence, theory and person-based approach.

**Methods:** Three literature reviews were conducted. The first identified intervention components which would be most effective. The second identified potential barriers and facilitators to engagement and the third provided a detailed understanding of the target user (e.g. identity, needs). The first and second literature reviews informed a behavioural analysis of components necessary to maximise behaviour change (and quality of life). We mapped these to the COM-B and Behaviour Change Technique (BCT) taxonomy to use a shared language. The third literature review enabled us to create Guiding Principles for the intervention. All three reviews were also incorporated with Social Cognitive Theory to create a logic model hypothesising how the intervention works.

**Findings:** The evidence-base suggested that physical activity and CBT/Mindfulness techniques would be most effective. Techniques to overcome barriers to engagement were identified. A striking feature of cancer survivors' identities was that many with poor quality of life did not necessarily want to be perceived as unwell and were sensitive to information about links between cancer and behaviour. Key guiding principles were therefore to use a wellbeing, rather than illness discourse and to avoid arguments about secondary prevention of cancer through behaviour change.

**Discussion:** The evidence, theory and person-based approaches all identified unique intervention components which combined to maximise chances of intervention success.



# Developing & evaluating e/mHealth interventions

15:30 - 17:00

Caoimhe Hannigan

15:30 - 17:00

## ProACT: Fostering patient and public involvement within the design of digital health solutions for multimorbidity.

M. Galvin<sup>1</sup>, J. Doyle<sup>2</sup>, C. Hannigan<sup>1</sup>, E. Murphy<sup>1</sup>, S. Smith<sup>2</sup>, J. Dinsmore<sup>1</sup>

<sup>1</sup>Trinity College Dublin, Ireland

<sup>2</sup>Dundalk Institute of Technology, Ireland

**Background:** Within Europe there are 50 million people living with multimorbidity. However, healthcare systems have not been designed to effectively support them. ProACT (Integrated Technology Systems for ProACTIVE Patient Centred Care) is a digital health EU H2020 research programme that seeks to address this problem by developing and evaluating a digital integrated care system to support older adults (65 +) living with multimorbidity. This presentation will illustrate how Public and Patient Involvement (PPI) was achieved within ProACT, with participants becoming co-design partners.

**Methods:** Vital to ProACT, is eliciting the voices of people living with multimorbidity (patients, formal/informal caregivers, health care practitioners). Therefore, a co-design methodology was adopted. This combined traditional semi-structured interviews and focus groups (166 stakeholders), with action research (EU trials involving 120 patients and their care networks), and user-centred design methodologies (design workshops and usability testing). The data gathered from these research activities was analysed using Thematic Analysis (Braun and Clarke, 2006).

**Findings & Discussion:** The themes that emerged (impact of multimorbidity; self-management; medication; knowledge, information and education; sources of support; communication; training; and technology (Doyle, Hoogerwerf, Kuiper, et al., 2017)) will be presented. Additionally, the key innovations of the ProACT system will be outlined. However, the focus will be upon exploring how, as a consequence of a co-design methodology, PPI was achieved. Conclusions will inform dialogue on how digital health solutions can improve home-based integrated care but also how health psychology researchers can implement PPI by borrowing existing methodologies, successfully implemented, in the discipline Human Computer Interaction.

15:30 - 17:00

## ProACT (Integrated Technology Ecosystems for ProACTive Patient Centred Care) Proof of Concept trial: Study protocol

C. Hannigan<sup>1</sup>, E. Murphy<sup>1</sup>, J. Kuiper<sup>2</sup>, A. Jacobs<sup>2</sup>, M. Galvin<sup>1</sup>, E. O'Byrne<sup>3</sup>, S. Smith<sup>4</sup>, J. Doyle<sup>4</sup>, J. Dinsmore<sup>1</sup>

<sup>1</sup>Trinity College Dublin, Ireland

<sup>2</sup>imec, Belgium

<sup>3</sup>Home Instead Senior Care, Ireland

<sup>4</sup>Dundalk Institute of Technology, Ireland

**Background:** An estimated 50 million people in the EU live with multiple chronic diseases, which deeply impact quality of life. Digital health technologies provide opportunities to improve care provision for persons with multimorbidity (PwMs), and to empower PwMs to play an active role in self-managing their health. ProACT aims to develop and evaluate a digital system to improve and advance home-based integrated care for PwMs.

**Methods:** Participants in this Proof of Concept (PoC) trial will be 120 older PwMs (aged 65+) along with members of their care network (e.g. informal carer, healthcare professional). The ProACT system—including an iPad, sensors/devices to collect clinical, non-clinical and ambient parameters, and the ProACT application—will be deployed to participants in their home for 12 months. The study will use an action research design, consisting of three evaluation cycles. Quantitative and qualitative feedback and evaluation data will be collected from participants at 5 time-points during the trial.

**Findings:** Study endpoints include usability and acceptability of technology, user burden, quality of life, self-efficacy, social connectedness, illness perceptions and self-management skills/behaviours. Following recommendations for pilot, PoC studies, analyses will focus on providing descriptive evidence and indications of the range of possible responses rather than on formal hypothesis testing.

**Discussion:** This study will address key questions about the potential for digital health technologies to improve self-management and support integration of care for older PwMs. The findings of this Proof of Concept trial will inform further development and evaluation of the system in larger-scale controlled trials.

15:30 - 17:00

## A Network Meta-Analysis of the Modalities used to deliver eHealth Interventions for Chronic Pain.

S. Haugh<sup>1</sup>, B. Slattery<sup>1</sup>, L. O'Connor<sup>1</sup>, K. Francis<sup>1</sup>, C. Dwyer<sup>1</sup>, S. O'Higgins<sup>1</sup>, B. McGuire<sup>1</sup>

<sup>1</sup>National University of Ireland Galway, Ireland

**Background:** Traditional approaches to interventions for chronic pain are subject to constraints (e.g. labour intensive). To negate these, researchers have begun administering interventions via technologies. The objective of this Systematic Review (SR) and Network Meta-Analysis (NMA) is to evaluate the treatment modalities (e.g. internet) delivering interventions for chronic pain.

**Methods:** RCT's investigating technologically delivered interventions for adults with chronic pain were included. Reviewers assessed the eligibility of studies, extracted data and assessed the risk of bias. Interventions were classified as their primary mode of delivery (e.g. Internet). A random effects network meta-analysis of interventions for pain interference was created in a Bayesian framework with vague priors. Pairwise meta-analyses were carried out on secondary outcomes: pain intensity, depression and quality of life. Additional covariates were added in an attempt to reduce heterogeneity.

**Findings:** The initial search returned 16,515 studies with 101 papers assessed based on full text; 24 studies were included. Studies were at a low to moderate risk of bias. Analyses indicated that telephone supported interventions were the most effective and also offered support for internet studies and those delivered via interactive voice response. An updated search added additional eight studies to the model. Final analyses and an updated ranking of eHealth modalities will be discussed.

**Discussion:** Findings from this study will assist patients and researchers to make informed decisions regarding which modalities deliver more effective interventions, require further investigation and whether any modality should be avoided. However, there are limitations; specifically a shortage of suitable papers.

15:30 - 17:00

## Evaluation of an online information platform for back pain patients and their GPs

A. Schöpf<sup>1</sup>, E. Farin-Glattacker<sup>1</sup>, M. Körner<sup>2</sup>, N. Röttele<sup>2</sup>, P. van der Keylen<sup>3</sup>, S. Voigt-Radloff<sup>4</sup>

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<sup>3</sup>Institute of General Practice, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany

<sup>4</sup>Cochrane Germany, Medical Center – University of Freiburg, Faculty of Medicine, Germany

**Background:** The aim of the study is to develop and evaluate an online information platform for GPs and patients providing evidence-based and up-to-date information about the treatment and self-management of back pain. GPs can use the platform during consultations and patients at home. The platform contains additional advice on good patient-physician communication for GPs and patients.

**Methods:** For the cluster-randomised study, we will recruit 1.500 patients and 150 GPs. Both patients and GPs will complete questionnaires at three measurement points. We will calculate separate two-level multilevel linear models for both follow up measurements (t1 and t2). Interviews with 50 patients and 25 GPs about their experience with the platform and the communication process will be analysed with a framework analytical approach. Additionally, the platform will be evaluated using the user data of the platform and routine data from health insurances.

**Expected results:** We expect patients and GPs using the platform to assess their informedness and the physician-patient communication significantly better than the control group. Furthermore, we expect that patients in the intervention group rate their self-efficacy and health literacy higher than control group patients and have less days of absence from work.

**Current stage of work:** Currently the platform is designed. The evaluation will start in summer 2018.

**Discussion:** Results will provide evidence whether evidence-based back pain information which is jointly used by patients and GPs can improve the patient-centeredness of consultations as well as patients' health outcomes. If successful the online platform can be adapted for other health conditions.

15:30 - 17:00

## An exploration into affect, coping and post-traumatic growth in cancer patients: a two-phase study.

N. Warner<sup>1</sup>, A. Groarke<sup>1</sup>, J. Groarke<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** The influence of affect and coping styles on post-traumatic growth (PTG) is unclear. The first phase of this study examined positive affect (PA), negative affect (NA) and savouring as PTG predictors in cancer patients.

Music is frequently employed to induce positive/negative affective experiences. Affect regulation (AR) is an everyday function of music listening (ML). Considering phase one results, this novel research using Experience Sampling Methods (ESM) will further explore the relationship between PA/PTG in cancer survivors, while longitudinally addressing ML/AR in everyday contexts.

**Methods:** In phase 1 cross-sectional data was collected at least one-year post cancer diagnosis (N = 59). The influence of PA, NA (Positive and Negative Affect Schedule), and savouring (Savouring Beliefs Inventory) on PTG (Silver Linings Questionnaire) was examined through Hierarchical Multiple Regression.

In phase 2, ESM (MuPsych application) will measure PA, NA, savouring, and PTG at baseline/3 weeks later, alongside momentary assessments of affective experience during ML/everyday life for 3 weeks.

**Findings:** PA was a significant predictor of PTG ( $\beta = .39$ ,  $p = .01$ ) explaining 10% of variance. NA ( $p > .05$ ) and savouring did not predict PTG, however a significant correlation was observed between savouring and PTG ( $r = .23$ ,  $p < .05$ ).

Data collection for phase two is ongoing. It is hypothesised that PA will predict PTG, and relative to other activities, ML will increase PA/AR, which will be associated with PTG.

**Discussion:** Should ML be feasible in inducing AR in cancer patients, incorporating music into eHealth interventions to enhance PA would be advantageous.

15:30 - 17:00

## Do electronic adherence monitoring devices work? Systematic review and meta-analysis of effect on medication adherence

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<sup>2</sup>School of Pharmacy, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand

<sup>3</sup>Woolcock Institute of Medical Research, University of Sydney, Sydney, Australia

**Background:** Medication non-adherence is associated with poorer health outcomes. Electronic adherence monitoring devices (EMDs) have increasingly been used in adherence interventions. However, the effectiveness of EMDs for improving adherence is unknown. This systematic review and meta-analysis aims to determine the effectiveness of EMDs for improving adherence in chronic disease.

**Methods:** A systematic review was conducted using Ovid, MEDLINE, EMBASE, PsycINFO, and CINAHL databases. Randomised controlled trials published between 1946 and Feb 2016 which investigated the effect of EMDs as part of an adherence intervention in chronic disease and included a measure of adherence were included. Extracted data included study sample demographics, intervention characteristics, and adherence outcomes. Risk of bias was assessed using the Cochrane tool. Data from eligible studies were analysed using random-effects meta-analysis

**Findings:** A total of 42 trials were included in the systematic review. Of these, 29 reported a significant difference in adherence between the intervention and control groups (difference in adherence range = +7% to +80%). The meta-analysis included 15 comparisons across 14 studies with 1751 participants total. Pooled effect showed that mean percentage difference in adherence between intervention and control groups was 17.93% (95% CI 12.98%, 22.89%,  $p < 0.00001$ ). Significant statistical heterogeneity was present ( $\chi^2 = 163.96$ ,  $df = 14$ ,  $p < 0.00001$ ;  $I^2$  statistic = 91%). Effect was stable to age, publication year, and study weight.

**Discussion:** Adherence interventions incorporating EMDs appear to have a positive effect on medication adherence in chronic disease. Whether these improvements are sustainable and translate into clinical benefits requires further research.

15:30 - 17:00

## Mobile health technology interventions for suicide prevention: A systematic review and meta-analysis

R. Melia<sup>1</sup>, K. Francis<sup>2</sup>, E. Hickey<sup>1</sup>, J. Duggan<sup>3</sup>, J. Bogue<sup>4</sup>, M. O' Sullivan<sup>5</sup>, D. Chambers<sup>6</sup>, K. Young<sup>3</sup>, A. Tomac<sup>7</sup>

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<sup>4</sup>School of Psychology, National University of Ireland, Galway, Ireland

<sup>5</sup>Suicide Prevention Resource Office, Health Service Executive West, Ireland

<sup>6</sup>ReachOut Ireland, Ireland

<sup>7</sup>Child and Adolescent Mental Health Services, Health Service Executive Mid-West, Ireland

**Background:** Previous research has reported that two of the major barriers to help-seeking for individuals at risk of suicide are stigma and geographical isolation. Mobile technology offers a potential means of delivering evidence-based interventions with greater specificity to the individual, when needed. The aim of this review is to examine the effectiveness of mobile health technology-based interventions for suicide prevention.

**Methods:** The search includes CENTRAL, MEDLINE, Embase, PsycINFO and CRESP. Studies that have evaluated the effectiveness of interventions delivered via mobile health technology for suicide prevention, or have reported suicide-specific outcomes, within a randomised controlled trial (RCT), pseudo-RCT or observational pre-test/post-test design will be included in the review. Two authors will independently extract data and assess the study suitability in accordance with the Cochrane Collaboration Risk of Bias Tool, prior to completing a meta-analysis.

**Expected results:** The results are expected to highlight the need for further research studies evaluating the impact of mobile technology interventions on suicide-specific outcomes.

**Current stage of work:** Two authors are currently completing the search strategy.

**Discussion:** To date, evaluations of mobile technology-based interventions in suicide prevention have focused on evaluating content as opposed to effectiveness. The current review will address a gap in the literature by evaluating the effectiveness of mobile technology interventions in suicide prevention. It is imperative that research identifies the evidence base for such interventions in suicide prevention in order to inform policy, guide clinical practice, inform users and focus future research.



# Health protection, screening, & primary care

15:30 - 17:00

Caroline Kelleher

15:30 - 17:00

## Psychosocial predictors of HIV rapid testing among men who have sex with men in Ireland

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<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** The psychosocial predictors of HIV testing are well documented but the extent to which these findings apply to Rapid HIV testing is unknown. A recent systematic review suggested that the predictors of conventional HIV testing are best represented by the Theory of Planned Behaviour (TPB). However, it also noted that fear of negative results and fear of stigma are the most frequent self-reported barriers to testing. In most TPB research on testing, the emotional process of fear is not examined. This study aims to test the incremental validity of adding fear-related variables to a TPB model of rapid HIV testing.

**Method:** This is a cross-sectional study focused on men who have sex with men, who are over 18 and resident in Ireland. At least 208 participants will be recruited. Participants will complete the HIV-Knowledge Questionnaire, the HIV Antibody Testing Attitude scale, the Sexual Risks scale, the Fear of Positive HIV Result scale, a HIV Perceived Behavioural Control scale and the Subjective Norms Regarding HIV Testing scale. HIV testing intentions and behaviour will also be measured. The TPB model and the TPB+Fear models will be compared using SEM.

**Expected results:** It is expected that including fear-related variables will account for significantly more variance in testing intentions and behaviour and result in significantly better model fit.

**Current stage of work:** Data collection ongoing.

**Discussion:** This study may demonstrate that the emotional processes underlying HIV testing should be examined more closely. It will provide vital information to services implementing Rapid HIV testing.

15:30 - 17:00

## STI and HIV behavioural surveillance in Ireland: future-proofing public health prevention efforts through consensus-building

S. Tecklenborg<sup>1</sup>, C. Kelleher<sup>1</sup>

<sup>1</sup>Royal College of Surgeons in Ireland, Ireland

National second generation surveillance systems combine biological surveillance – notification of new cases of sexually transmitted infections (STIs) and HIV - with behavioural surveillance (BS) – monitoring of population level of risk related to STI and HIV transmission. Ireland does not have a functional BS system; while notified STIs have increased by 62% between 2001 – 2011.

This study aims to develop and achieve consensus, on a set of STI/HIV behavioural indicators, in line with recommendations from Ireland's national sexual health strategy.

A modified E-delphi (an online version of the Delphi technique) approach was used to achieve consensus on a set of core STI and HIV behavioural indicators across a range of risk domains (i.e. Sexual experiences; Partners; Condom Use; STI/HIV testing; Paid for sex; Knowledge and Attitudes; Gender based violence; Drug and Alcohol use; Safe injecting practices and Accommodation status) and risk populations (i.e. General Population; Young People; Men who have sex with men; Sex Workers; People who inject drugs; Prisoners; Migrants; People living with HIV and AIDS; Transgender and Homeless).

57 representatives from: public/private STI clinics; NGOs; STI laboratories; and others took part in both rounds of the study. Indicators (N=120) were ranked in terms of importance (1 = Not important, to 10= Essential). Consensus (90% of respondents agreeing with a score of 7 or more) was achieved for 77 indicators in total.

These indicators are currently being tested for feasibility and will determine and inform future surveillance activities in STI and HIV prevention efforts in Ireland.

15:30 - 17:00

## Using Intervention Mapping to design a sexual health service for women on opioid substitution treatment

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**Background:** Women on opioid substitution treatment (WOT) are at high risk for sexually transmitted infections (STIs) and blood-borne viruses (BBVs). Although community pharmacists (CPs) provide regular treatment to WOT, little attention has been paid to the role of CPs in promoting sexual health. Using intervention mapping (IM) this study aimed to identify psychosocial and socio-structural factors relating to risk of STIs/BBVs among WOT and inform the design of a pharmacy-based sexual health service.

**Methods:** Corresponding to Phase I of IM, a 'Needs Assessment' was undertaken. Thirty-four semi-structured interviews (WOT, N=20; CPs, N=14), and two focus groups (WRO, N=3; CPs, N=3) were conducted in South West England (UK) between October 2016 and April 2017. Data were analysed using Framework Analysis.

**Findings:** Based on the 'Needs Assessment' model, addressing socio-structural factors (e.g. gender-based violence) and individual-level factors (e.g. knowledge) are crucial to prevent STIs and BBVs among WOT. Both groups of participants identified CPs as key deliverers of sexual health services for WOT. Potential barriers included time pressures, and stigma and discrimination towards WOT.

**Discussion:** Our findings inform the development of the first pharmacy-based sexual health service for WOT in England. Potential barriers, and strategies to address them, need to be considered. Phase I of IM will inform Phase II and III, when change objectives and theory-based intervention methods will be identified. Findings from this study could effectively shape policy strategies and STI/BBV preventive services, by acknowledging the importance of taking a socio ecological perspective to sexual health among WOT.

15:30 - 17:00

## Interventions for Promoting Policy Adoption or Change: a Systematic Review

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**Background:** Air quality is a problem for several UK and EU regions from both health and growth viewpoints. Several regions are struggling to reach air quality goals set both nationally and by the EU. In order to find out how to facilitate ambitious air quality policy-making we aim to find out what behaviour change tools have been efficient in previous interventions to adopt new or change existing policies. Further, we aim to find out what types of adoption barriers are prevalent in policy-making contexts.

**Qualitative Methods:** A narrative systematic review was done to find previous examples where interventions have been aimed at policy adoption. Successful interventions were re-coded into behaviour change tools. Barriers to policy adoption were also looked at.

**Findings:** The systematic review has showed that a combination of three behaviour change tools should be the most successful. Such an intervention should include elements of modelling and training or education. Managing administrative, cultural and economic barriers are the most frequent.

**Discussion:** It is hard to make recommendations based on a limited and heterogeneous (in methodology and reporting) literature set. We feel that more research is needed into the adoption process itself, as the current focus is aimed toward implementation.

Nevertheless, our recommendation to researchers and practitioners is to target policy adoption on several fronts. It seems to be important to show other cases where similar policies worked (“modelling”). Education and training are also important.

15:30 - 17:00

## Decision-making styles and grocery shopping behaviors

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**Introduction:** The supermarket is one of the most important point-of-choice settings in daily life, holding great potential for increasing healthy food choices. To date, however, it is unknown how decision-making styles (DMSs; intuitive, spontaneous or rational) relate to grocery shopping behaviors.

**Methods:** This study was conducted in a Dutch supermarket, using a cross-sectional observational design. Participants (n=68; age=46.9; 67.6% female) filled out a survey about three of their food purchases and answered questions about their grocery shopping behaviors (such as duration, moment and frequency), their general decision-making style (GDMS with 5-point ratings; Scott & Bruce, 1995), and provided socio-demographics. Data were analyzed using ANOVAs, linear and logistic regressions.

**Findings:** On average, participants scored highest on the intuitive DMS (M=3.68; SD=1.03; rational: M=3.43; SD=0.91; spontaneous: M=3.12; SD=0.91). A one-way ANOVA showed a marginally significant difference in intuitive DMS between high and low educated groups ( $F(2,64) = 2.902, p = .062$ ), suggesting that low-educated participants generally rely more on their intuition. Additionally, an intuitive DMS marginally significantly predicted the average duration of one grocery shopping trip negatively ( $\beta = -.270, p = .051$ ). A rational DMS, on the other hand, was marginally significantly associated with doing grocery shopping at a regular moment ( $\chi^2(3) = 7.747, p = .052$ ).

**Discussion:** Preliminary results show that people mostly employ an intuitive DMS, potentially explaining why many generic health education interventions targeting reflective food choices are ineffective. Insights of this pilot study will be used for the development of nudging interventions at the supermarket.

15:30 - 17:00

## Using primary care to help increase uptake of bowel scope screening in Yorkshire: a protocol

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<sup>4</sup>Patient Representative, United Kingdom

<sup>5</sup>South Tyneside NHS Foundation Trust, United Kingdom

**Background:** Bowel scope screening (BSS; Flexible Sigmoidoscopy) significantly reduces an individual's risk of colorectal cancer (CRC) and is offered to 55 year olds as part of the NHS Bowel Cancer Screening Programme. Uptake is low (43%) and socially graded (33% to 53%). This study will build on General Practice (GP) endorsement and patient navigation (PN) literature, and explore the potential for primary care to increase BSS participation in Yorkshire.

**Methods:** A three-arm randomised controlled trial (1:1:1) involving 2000 BSS eligible people is planned: 1) standard care only, 2) a primer letter and brief information leaflet to increase future engagement with the BSS invitation, followed by a self-referral reminder letter for those who do not attend BSS, 3) as above, but the self-referral reminder is contained within a PN call. Anonymised data will be extracted from the NHS bowel cancer screening system, and binary logistic regression used to evaluate the impact of each intervention on BSS attendance and outcomes. Evaluation will also include a GP staff survey, patient telephone interviews, and a cost analysis.

**Expected results:** Uptake in arm 1 is hypothesised to be 35%, with arm 2 showing an 11 percentage point increase (46%), and arm 3 an 18 point increase (53%).

**Current stage of work:** Recruiting GPs.

**Discussion:** GPs potentially have an important role to play in engaging their patients on the topic of CRC risk reduction and encouraging informed screening decisions. The results will be presented to local GPs and support provided for the implementation of successful interventions.

15:30 - 17:00

## Making lung screening decisions EASier with visual narratives: creating Engaging, Accessible and Supportive Information material

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**Background:** Lung cancer survival is particularly poor in the UK. Lung screening can improve survival by detecting cancer at an earlier, more treatable, stage. In Scotland, people from economically deprived areas – where lung cancer mortality is high – would be most likely to benefit from screening. Traditionally, invitees to cancer screening are sent text-based information aimed at supporting their decision to screen. However, this style of information is likely to be disengaging and inaccessible for people from economically deprived areas, where literacy levels and screening uptake are proportionally lower. Visual narratives are engaging, accessible and can support comprehension.

The project's aim is to determine if, and how, visual narrative modes of communication can be used to create engaging, accessible and supportive information material for lung screening.

**Method:** Lung screening information material will be designed during participatory research meetings with three groups of up to eight participants, aged 50 to 70 years, from deprived neighbourhoods in Greater Glasgow. A comic artist will participate in these meetings. Qualitative interviews and a large-scale mailed questionnaire will assess perceived acceptability, appeal, usefulness and readability of, and likelihood of engaging with, the new material. The questionnaire will also measure lung screening knowledge, intention and self-efficacy, and decisional confidence.

**Expected results:** Improved understanding of how to create engaging, accessible and supportive lung cancer screening communication.

**Current stage of work:** Recruitment for participatory research groups.

**Discussion:** Visual narratives provide an innovative method for communicating health information, which is relevant to many areas of Health Psychology research.



15:30 - 17:00

## Identifying why people do not attend an agreed appointment for a lung cancer screening trial?

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If people make an appointment, it suggests they are motivated to attend, however, this intention does not always translate into action. People failing to attend cancer screening appointments have been described as 'inclined abstainers'. The aim of this study was to examine barriers to attendance among people who initially arranged an appointment for a lung screening trial, but did not attend.

**Methods:** Potential participants (n=123) were identified as inclined abstainers from the Early Cancer detection test - Lung cancer Scotland (ECLS) Trial, a trial inviting people aged 50-75 who were at high risk of lung cancer. Potential participants were invited to participate in a semi-structured interview. The data were analysed using a framework approach.

**Findings:** Of the inclined abstainers invited to participate, 15 people expressed an interest in participating, and eight agreed to be interviewed. All inclined abstainers reported an initial practical barrier to appointment attendance (e.g. work, illness, other priorities). Reasons for not reappointing included low perceived risk for lung cancer, lack of lung symptoms and fear of lung cancer. Some perceived lung cancer to be one of the deadliest types of cancer.

**Discussion:** Participating in a screening trial is not the same as participating in an established screening programme, however it is important to identify barriers and solutions to new screening programmes to ensure their optimal implementation. The motivational and volitional factors associated with non-attendance of lung cancer screening identified will help to target the development of interventions to support inclined abstainers to turn their intentions into action.

15:30 - 17:00

## Driving fear, self-efficacy, and attitudes towards road risk as risky driving antecedents among novice drivers

K. Žardeckaitė-Matulaitienė<sup>1</sup>, A. Endriulaitienė<sup>1</sup>, R. Arlauskienė<sup>1</sup>, L. Šeibokaitė<sup>1</sup>, R. Markšaitytė<sup>1</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

Driving fear, self-efficacy, and attitudes towards road risk might be the risk or protective factors for risky driving of diverse groups of traffic users. Still research results do not provide the answer if it is possible to predict future driving style of novice drivers from these psychological features at the beginning of their driving classes. The purpose of this study was to explore relationship between driving fear, self-efficacy and attitudes towards road risk at the beginning of driving training and risky driving behaviour after one year of licenced driving.

175 novice drivers participated in the study. They filled in self-reported questionnaires that consisted of Driving Cognitions Questionnaire, Adelaide Driving Self-Efficacy Scale, and Attitudes towards Risky Driving Questionnaire at the beginning of their driving training (Time 1). After 12 months of their independent driving they answered the Driving Behaviour Questionnaire assessing driving errors and intentional violations of novice driver (Time 2).

SEM revealed that riskier attitudes and lower self-efficacy at the beginning of driving training predict higher levels of driving errors after one year, whereas only riskier attitudes predicted more intentional violations after one year of independent driving. Fear of driving had no statistically significant explanatory value. Three mentioned psychological variables at Time 1 explained 22 percent of driving errors and 25 percent of intentional violations at Time 2.

It is useful to address attitudes and beliefs of drivers learners at the beginning of driving classes, as they might be the antecedents of later involvement in risky behaviour on the road.

# Health behaviours in the early years: the prenatal period to adolescence

15:30 - 17:00

John Bogue

15:30 - 17:00

## Profiles of youth and parent information management strategies: An exploratory look at adolescent e-cigarette use

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**Background:** E-cigarette use among U.S. adolescents has tripled, yet there is limited research on parent and youth information management strategies (i.e., monitoring, control, knowledge, solicitation, disclosure, and secrecy) as they relate to this use. The current study utilised a profile-based approach to explore patterns among these variables.

**Methods:** 569 students between the ages of 13 and 18 years ( $M_{age} = 16.25$ ,  $SD = 1.16$ ) were recruited from four high schools across Appalachia and one adolescent medicine clinic in West Virginia. Participants completed the Youth Behaviour Risk Survey (YRBS) to assess e-cigarette use, and measures of parent and youth information management. Analyses include hierarchical and k-means cluster analyses, chi-squares with post-hoc testing, ANOVA, and MANOVA procedures.

**Findings:** Consistent with current literature, 57% ( $n = 127$ ) of students were identified as dual users and 43% ( $n = 96$ ) were identified as e-cigarette only users. A preliminary cluster analysis suggested a four-cluster solution, with each cluster representing different combinations of parental and youth strategies. User group was significantly related to cluster profile,  $\chi^2(3, n = 223) = 15.92$ ,  $p < .001$ , such that patterns of strategies for users particularly related to youth secrecy, youth disclosure, and parental knowledge.

**Discussion:** Results suggest bidirectional associations between parental and youth information management strategies and differences in profiles for e-cigarette and dual users. These findings could inform future research on parent and adolescent information management and clarify policy, particularly regarding eliciting parent help in reducing e-cigarette use. Results could also inform youth-focused education and preventative efforts.

15:30 - 17:00

## Protective factors for excessive internet use in adolescents with and without subculture affiliation.

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**Background:** Youth subculture affiliation (SA) appears to be an important risk factor with regard to adolescents' problem behaviour. Excessive internet use (EIU) emerged as a new type of problem behaviour, however, it has not been studied in adolescents affiliated with youth subcultures yet. Our aim was to explore the role of selected protective factors regarding EIU in adolescents with and without SA.

**Methods:** We collected data on 15-year-old elementary school pupils (N=532; 49.6% boys; mean age=15.4) who participated in the Health Behaviour in School aged Children study in 2014. The association of SA with EIU was assessed by linear regression models and adjusted for gender, family well off, computer use, and parental monitoring, parental rules and family support. We tested interactions of SA with Monitoring by mother and Family support and mediation effect of Monitoring by mother on the association between Family support and EIU.

**Findings:** SA was associated with EIU ( $p < 0.01$ ). From all tested interactions only interaction of SA with Family support was found to be significant. According to Sobels' tests relationship between Family support and EIU was mediated by Monitoring by mother only in adolescents without SA.

**Discussion:** Our findings imply that the risk of EIU is higher in adolescents affiliated with youth subcultures. There is a difference in how protective factors work in adolescents with and without SA. In adolescents with SA family support is the factor that seems to matter. Exploring protective factors which are strengthening resilience of adolescents with SA might be important.

15:30 - 17:00

## Are adolescents who report low socioeconomic status at higher risk of excessive Internet use?

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<sup>3</sup>Department of Community and Occupational Medicine, University Medical Center Groningen, University of Groningen, Netherlands

**Background:** Excessive Internet use (EIU) among adolescents has been found to be associated with several negative consequences, such as problems with mental health, low self-esteem, substance use, sedentary lifestyle or eating disorders. Low socioeconomic status has been suggested as being an underlying factor of EIU. The aim of this study was to explore the associations between several indicators of socioeconomic status and EIU in Slovak adolescents and differences in this association by gender.

**Methods:** We used data from the Health Behaviour in School-aged Children study conducted in 2014. Questions on EIU were asked to the half of the full sample of 13- and 15-year-olds. The final sample consisted of 2884 Slovak adolescents (mean age = 14.3; 50.5% boys). We assessed the associations between different indicators of socioeconomic status (mother's unemployment, father's unemployment, mother's highest education, father's highest education, perceived family wealth) and EIU using multiple linear regression models.

**Findings:** Older adolescents were more likely to report EIU. Adolescents whose parents had lower education, whose fathers were unemployed and who reported low wealth of their family were at higher risk of EIU. Boys and girls did not differ in this association.

**Discussion:** Adolescents reporting low socioeconomic status were at higher risk of EIU. Preventive actions aimed at optimising the way in which adolescents use the Internet should be focused on this vulnerable group in particular.

15:30 - 17:00

## Longitudinal associations between dyadic, individual, and collaborative plans: parent-child dyadic study

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<sup>2</sup>University of Colorado at Colorado Springs, United States

**Background:** This study investigated associations between parental planning of physical activity and child planning of physical activity, accounting for dyadic, collaborative, and individual plans.

**Methods:** Dyadic data from 101 parents and their children were collected at the baseline (Time 1) and the 2-week follow-up (Time 2). Children were 10-14 years old ( $M = 11.5$ ;  $SD = 1.19$ ), 52.5% were girls; parents were 29-66 years old ( $M = 41.19$ ;  $SD = 4.74$ ), and 89.1% were mothers.

**Results:** Across 3 types of planning only one dyadic longitudinal association emerged: higher levels of parental collaborative planning at Time 1 predicted higher levels of child collaborative planning at Time 2. There were following significant cross-sectional associations: higher levels of parental dyadic planning (Time 1) were related to higher level of individual and dyadic planning in children (Time 1); higher levels of parental collaborative planning (time 1) were related to higher level of collaborative and dyadic planning in children (Time 1).

**Conclusions:** Collaborative plans in which parents and children plan joint physical activity together were related within dyads: parental plans translated into plans reported by children at 2-week follow-up.

15:30 - 17:00

## Psychological impact of Folic Acid supplementation during pregnancy on children aged ten years.

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<sup>1</sup>University of Ulster, United Kingdom

**Background:** Folic acid taken during the first trimester of pregnancy can have beneficial effects for children but little is known of the effect of continued supplementation throughout pregnancy. It was hypothesised that children of mother's who continue to take folic acid supplements full-term will exhibit differences in strengths and difficulties, attachment, emotional intelligence (EI) and resilience from those who discontinued supplementation at the recommended 12 weeks.

**Methods:** Follow-up of a Randomised Control Trial previously conducted in 2005/06 which investigated the effect of Folic Acid Supplementation in the Second and Third Trimester (FASSTT study; ISRCTN19917787). Children now aged 10y whose mothers received folic acid full-term (n= 35) were compared to those whose mothers only received it during the first trimester (n=29). Children were assessed on the Resiliency Attitudes and Skills Profile &#40;RASP&#41;, Trait Emotional Intelligence Questionnaire Child Short Form (TEIQue-CSF), Strengths and Difficulties Questionnaire (SDQ) and Attachment Style Classification Questionnaire (ASCQ). Parents completed the Parenting Styles and Dimensions Questionnaire (PSDQ).

**Results:** Children in the treatment group scored significantly higher on creativity (U= 669.5, p=.027), independence (U= 652.5, p=.050), prosocial behaviour (U= 654.0, p=0.12), emotional symptoms (U= 316.5, p= .020), conduct problems (U= 340.5, p=.046), self control (U= 738.5, p=.002), secure attachment (U= 671.0, p=.025), anxious attachment (U= 344.5, p=.026) and positive parenting (U= 599.0, p=.046) when compared to the control group.

**Conclusion:** Folic acid supplementation continued throughout pregnancy may enhance psychological development in children. A mechanism through increased language and communicative effectiveness is proposed.



# Lifestyle behaviour change

15:30 - 17:00

Molly Byrne

15:30 - 17:00

## Four-week, pre-cessation exercise with coping skills training reduces quit day smoking cue reactivity vs control

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**Background:** Unhealthy behaviors co-exist in low-income populations. Strategies addressing multiple behaviors (e.g., smoking and physical inactivity) may have synergistic influence on promoting healthier lifestyles. Based on evidence that physical activity (PA) can attenuate nicotine withdrawal and craving, engaging in sustained PA could facilitate progressive reduction (extinction) of smoking cue reactivity over time. Mixed evidence of PA effects on smoking outcomes leads to questions about the mechanisms by which sustained PA may promote smoking behavior change. We pilot tested a pre-quit day PA counseling strategy to examine one possible mechanism.

**Methods:** We randomized 101 treatment seeking sedentary smokers to receive 4 weeks of telephone-based, pre-cessation counseling that included either (a) standard (Control) CBT coping skills training; or (b) "Step Up to Quit" (SUTQ) that promoted daily walking plus skills training and counterconditioning guidance to exercise when confronted with urge-eliciting smoking cues. Latent growth curve modeling (LGCM) tested group differences in quit day smoking urge across massed cue exposure trials. Modeling controlled for six factors known to affect cue reactivity (e.g., withdrawal).

**Findings:** LGCM fit the data well ( $\chi^2 = 21.911$ ,  $p=.405$ ; CFI= .997, RMSEA= .026 [90%CI=0.00, .109]). The linear trend suggested that, compared to Controls, SUTQ participants showed greater reduction in urge across exposure trials ( $b= -.138$  [ $z= -1.932$ ],  $SE=.072$ ,  $p=.053$ ).

**Discussion:** Results suggest that, compared to standard skills training, SUTQ improved participants' management of cue reactivity - a behavioral mechanism through which sustained PA adoption may promote smoking behavior change.

15:30 - 17:00

## Quitlink: Accessible smoking cessation support for people living with severe and enduring mental illness

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<sup>5</sup>University of Wollongong, Australia

<sup>6</sup>Deakin University, Australia

**Background:** People with severe mental illness (SMI) have a high, persistent smoking rate. Evidence-based smoking cessation interventions, such as quitlines, are underutilised by this group.

The primary aim is to examine the effectiveness of the Quitlink intervention on prolonged abstinence amongst smokers with SMI.

**Methods:** A multi-centre prospective, randomised, open, blinded endpoint (PROBE) design will compare standard smoking care alone against Quitlink. 382 smokers will be recruited from mental health services in Victoria, Australia. Quitlink will utilise peer workers to refer smokers with SMI to Quitline, who will deliver a tailored and proactive smoking cessation intervention. The primary outcome measure will be 6 months prolonged abstinence. Repeated measures will be analysed using generalised linear mixed models.

**Expected Results:** We anticipate that for the primary outcome, success will occur in 1% of the control arm vs 8% in the intervention arm. Our qualitative component will identify potential improvements, and barriers to full participation and engagement with the service.

**Current stage of work:** This study has been funded by the National Health and Medical Research Council and the research protocol is currently being drafted. Recruitment is expected to begin May 2018.

**Discussion:** This is a highly translatable intervention resulting from linking two existing services (Quitline and mental health peer workers). It will be the world first RCT of a Quitline intervention delivered to people with SMI that also includes a concurrent economic evaluation. It has the potential to greatly improve the health of individuals' longevity, mental health and reduce health care costs.

15:30 - 17:00

## Risk Behavior in Adolescence: Understanding and Bringing Change

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<sup>2</sup>ICSSR, New Delhi, India

There has been concern about the increasing incidence of risky behaviors in adolescents. Given the fact that adolescence is a "healthy" period, there is paradoxically a marked increase in their disruptive behaviors that have the potential to compromise the health of the young adolescent. Explanations for such behavior have ranged from cognitive immaturity to distressful family contexts, or absence of appropriate community support systems that are adequate in their functioning for optimizing the potential of the growing person. The present study is based on a qualitative design to understand adolescents' perception of risk and, in doing this, to understand the factors that influenced their decisions about engaging in risky behaviors. The identified sources of these behaviors were further discussed with each individual through a face to face interaction to delineate the causes for their risky behaviors for designing future interventions. With their affirmation of a need to understand the positive role of mindfulness, a small group of 25 adolescents were selected for a short program on psycho-education based on cognitive training and mindful techniques. The results are discussed in the light of changed perceptions and altered beliefs of these adolescents, how by being active participants for bringing about change in their existing perceptions they could initiate better control over their own health. The findings have promising implications for using techniques such as mindfulness for bringing about health behavior change in adolescents.

15:30 - 17:00

## Modifying attentional and approach biases for reducing energy drink consumption

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<sup>1</sup>Flinders University, Australia

**Background:** Energy drink consumption is increasing worldwide, especially among young adults, and has been associated with negative health outcomes, ranging from headaches and anxiety, to fatal caffeine toxicity. In two experiments, we tested the prediction that energy drink consumption is in part driven by automatic cognitive processes (attentional and approach biases), with a view to modifying these to reduce consumption.

**Methods:** Young adults (18-25 years) who regularly consume energy drinks completed the dot probe (Exp.1; N=116) or approach-avoidance task (Exp.2; N=110) to measure attentional and approach bias for energy drink cues, respectively. They then underwent a cognitive bias modification protocol where they were trained to direct their attention away from pictures of energy drink cans (Exp.1), or to push a joystick away from themselves in response to these pictures (Exp.2). Following a post-training assessment of attentional (Exp.1) or approach bias (Exp.2), energy drink consumption was measured by an ostensible taste test.

**Findings:** Regular energy drink consumers showed both an attentional and an approach bias for energy drink cues. Cognitive bias modification successfully reduced both biases. Approach bias modification, but not attentional bias modification, reduced energy drink intake, although not statistically significantly so.

**Discussion:** The results lend support to dual-process models which emphasise automatic processing as a key driver of consumption. At a practical level, approach bias modification could offer potential scope as an intervention for reducing energy drink consumption. However, more extensive training may be required beyond the single session used here.

15:30 - 17:00

## Starting, stopping, slowing down: A systematic review of third-level students' motivations for psychoactive substance use

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<sup>2</sup>Sexual Health Centre, Cork, Ireland

**Background:** The prevalence of substance use by third-level students globally has been documented, and survey data indicates the majority of university students in Ireland, have tried, or regularly use, substances. However, this population may be under-represented in national drug policy programmes and actions.

Third-level student motivations to change their substance use may be reshaped by access to substances via the darknet, creation of new substances, reports in media and substance use by peers. Understanding motivations to begin or change substance use behaviour is necessary to design targeted interventions and a synthesis of the current literature is needed. This systematic review will describe motivators for substance use behaviour in third-level students, to inform the development of a harm reduction behaviour change intervention.

**Method:** We will search PsycINFO, PubMed, MEDLINE, EMBASE, reference lists and sources of grey literature. Two authors will conduct the reviewing process, following guidelines described by Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA). Search terms used are 'motivation' AND 'drug use' AND 'third-level student OR college student OR university student'. Studies will be included if they report on third-level students and motivations for substance use behaviour. Studies will be excluded if they do not report on substance use motivations in third-level students.

**Discussion:** This systematic review will build on existing literature, identifying motivational factors which contribute to the use of psychoactive substances by third-level students. The findings will inform the design of an intervention for substance use behaviour change in third-level students.

# Changing behaviour: challenges & solutions

15:30 - 17:00

Rachel Burns

15:30 - 17:00

## Physician perceptions of the importance of behavior change counselling and their ability to deliver it

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**Background:** Physician training in behavior change counselling (BCC) for chronic disease prevention is an emerging research area. As part of a larger study to develop a theory and evidence-based training program, we sought to determine what physicians believe to be the most important behavioral issues they face in their efforts to prevent chronic disease morbidity and mortality.

**Methods:** This study used an integrated knowledge translation (iKT) approach to ensure our training program met the needs of our target stakeholder group. Physicians from across Canada completed an online survey (LimeSurvey) and indicated the most important and challenging behavioural issues (e.g., smoking, diet, physical activity, adherence) they face in their practice, and the extent to which they feel confident in their BCC skills.

**Findings:** 111 physicians (22 cardiologists, 21 respirologists, 13 internists, 55 other) from six provinces across Canada completed the survey. The 5 most endorsed behavioral problems were: physical inactivity (95%), smoking (92%), medication non-adherence (88%), unhealthy diet (87%) and excessive alcohol consumption (65%), which were problematic in at least 50% of patients. 100% of physicians said it was important to address health risk behaviours, though less than half (45%) felt confident in their BCC skills. Most (64%) reported being interested in participating in a BCC training program to improve their skills.

**Discussion:** Results highlight physicians' perceived importance and willingness to acquire BCC skills to improve health risk behaviors for chronic disease management. Results will be used to inform the design of BCC training program for physicians.



15:30 - 17:00

## How effective are psychosocial interventions delivered by healthcare professionals for weight-management? A review of reviews.

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**Background:** Healthcare professionals (HCPs) can play a key role in weight-management because they are a trusted source and have face-to-face contact with at-risk people. This review of reviews collates the evidence to determine: (a) the effectiveness of healthcare professional delivered weight-management interventions, (b) intervention characteristics related to effectiveness, and (c) sample characteristics related to effectiveness.

**Method:** Eight databases were searched for systematic reviews of randomised controlled trials of HCP-delivered psychosocial interventions that included at least one behaviour change technique (BCT). Data regarding weight-management outcomes and moderating factors were extracted.

**Findings:** The search identified 13 reviews. All reviews reported significantly greater weight-loss ( $k=10$ ) in intervention versus control initially but had mixed results at 6+ months. Three (out of 4) reviews reported that more time intensive interventions were more effective than less intensive interventions. The addition of BCTs (e.g., goal-setting) and/or pharmacological support increased effectiveness in both reviews that reported this.

Two reviews showed that weight-gain interventions were more effective than comparison groups (+1.79kg; +1.80kg); one of these reported a trend for greater weight-gain in younger samples and in at-risk of malnourishment rather than malnourished groups. A third review concluded that HCP-delivered interventions were ineffective for weight-gain.

**Discussion:** HCP-delivered interventions can be successful in weight-management compared to comparison groups, but particularly so when accompanied by pharmacological support and/or explicit use of BCTs. More detailed guidelines on reporting in systematic reviews (e.g., BCTs included in interventions) and primary studies comparing identical interventions delivered by HCPs versus non-HCPs are required.

15:30 - 17:00

## A comparison of possible selves interventions on physical activity and physical activity self-definition model variables

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**Background:** Forming a physical activity (PA) possible self (PS) can increase PA and is theorized to influence self-views. The PA self-definition (PASD) model posits that PA enjoyment, trying, wanting, ability and commitment are related to PASD; a PA PS intervention focused on PASD model variables may increase PASD, in addition to PA. We compared effects of a PASD model-inspired PS intervention, a standard PA PS intervention and a control condition on PA and PASD model variables.

**Methods:** In this online experiment, 175 inactive adults (Mage = 30.29, SD = 10.79) were randomized to a standard PS condition (standard PA PS procedures), a PASD PS condition (emphasized PASD model aspects) or a control condition (wrote about their day). Participants completed demographics and, at baseline and 4 weeks post-intervention, measures of PA and PASD model variables.

**Findings:** Mixed between-within subjects ANOVAS revealed that PA,  $F(1,175) = 17.2, p < .001$  and PASD,  $F(1,175) = 71, p < .001$  increased from baseline to follow-up; there were no group effects. Standard condition participants reported stronger wanting,  $F(1, 175) = 3.89, p = .022$  and trying,  $F(1, 175) = 8.27, p < .005$  than controls; and there was a time effect for commitment,  $F(1, 175) = 5.85, p = .017$  at follow-up, with no interactive effects.

**Discussion:** Trends suggest a standard PS intervention offers some benefit over control but a PASD PS intervention does not. The increase in PA and PASD for all participants may be due to measurement reactivity.

15:30 - 17:00

## Evolife: A pilot trial of a web-based, evolutionary mismatch-framed intervention targeting physical activity and diet

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**Background:** This study sought to test the effectiveness of a theory-driven, online intervention (Evolife) aiming to increase physical activity level (PAL) and reduce energy intake (EI) among overweight and obese adults. The intervention used a rationale based on the evolutionary mismatch hypothesis and supported behaviour change through the inclusion of self-regulatory techniques delivered in an autonomy supportive climate.

**Methods:** Men and women aged 35-74 years with a body mass index of 25-39kg/m<sup>2</sup> were eligible. Fifty-nine participants were recruited and randomised to receive the intervention (N=30) or NHS online health resources (control, N=29). The 12-week intervention consisted of a website hosting behaviour change techniques, issuing participants with pedometers and brief dietary feedback. PAL was measured with activity monitors, EI with 3-day weighed food diaries. Secondary measures included weight, blood pressure and motivation, self-efficacy and self-regulation. ANCOVAs and regression were conducted to compare groups' outcomes and evaluate the processes of change.

**Findings:** The intervention group increased their PAL (adjusted mean difference (AM $\Delta$ )=0.03) and decreased their EI (AM $\Delta$ =-213.80kcal/day) to greater extents than the control group; differences between groups' change scores were of small effect size but did not reach significance (d=0.32 and d=-0.49, respectively). Meaningful reductions in weight and blood pressure were also made by the intervention group. Autonomous motivation, self-efficacy and self-regulation increased during the study but did not mediate the effect on behaviour.

**Conclusions:** Evolife was effective in improving theoretical predictors of behaviour change and influencing energy balance. Further work is needed to understand the underlying mechanism of change.

15:30 - 17:00

## Physical activity interventions for overweight and obesity during pregnancy: A systematic review

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<sup>6</sup>National Maternity Hospital, Dublin, Ireland

**Background:** This review aims to evaluate the effectiveness of Physical Activity (PA) interventions for overweight and obese pregnant women with a specific emphasis on the behaviour change techniques employed.

**Method:** MEDLINE, EMBASE, PsychInfo, CINAHL, Cochrane Library, PEDro, SportDiscus and PubMed databases were searched from inception. Searches were undertaken in June 2016 and an updated search is currently underway. Databases and journals were searched for randomised controlled trials of behavioural interventions designed to increase PA levels for overweight and obese pregnant women ( $\geq 25\text{kg/m}^2$ ). Two reviewers independently evaluated each intervention using the behaviour change techniques (BCT) taxonomy to identify the specific behaviour change techniques employed. Two reviewers independently assessed the risk of bias using the Cochrane Collaboration's tool.

**Results:** 6842 potentially eligible papers were identified; 15 studies were included (PA only  $n=7$ ; PA and dietary  $n=8$ ). Interventions included supervised or unsupervised exercise programs ( $n=7$ ), behavioural counseling ( $n=4$ ) and lifestyle education and advice ( $n=4$ ). A small number of interventions were developed based on theory, including transtheoretical model, social cognitive theory, stage theories and behavioural modification ( $n=4$ ). Common behaviour change techniques employed were: goals and planning, feedback and monitoring, shaping knowledge, social support, natural consequences, and antecedents.

**Conclusion:** This review identifies a range of individual BCTs that can be used to help improve PA levels for overweight and obese women during pregnancy, including goals and planning, shaping knowledge and social support. These results will be used to inform the development of an intervention to increase PA levels among overweight and obese pregnant women.

15:30 - 17:00

## What inspires youth to take up physical activity? Critical incidents in trial participants' interviews

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<sup>4</sup>Newcastle University, United Kingdom

**Background:** Despite a wealth of research investigating determinants of physical activity (PA) adoption, there is a need to understand what differentiates between those adolescents who become active and those who do not. We examined which aspects of a theory-based intervention low-active adolescents interpreted as key to changing their PA behaviour or beliefs about PA, comparing these to the logic model relevant for responses to the intervention.

**Methods:** The Let's Move It intervention was aimed at promoting PA and reducing sedentary behaviour. A subsample of students from intervention and control arms (n=34) were interviewed individually immediately post-intervention. To tap into change and subjectivity in interview talk, the transcribed interviews were analysed by drawing from the critical incident technique (CIT) and Goffmanian frame analysis. While the latter allows exploring interview talk as possible experiences and incidents, the CIT highlights events youth themselves present as important for their PA change, thus revealing potentially crucial intervention components.

**Results:** Six critical incident categories were identified in intervention participants' accounts: a renewed understanding of PA, a perception of freedom to make one's own choices, practical tips for PA increase in one's daily life, in-depth knowledge of disadvantages of sitting, means for sitting reduction in one's daily life and becoming aware of one's own sitting habits.

**Conclusion:** The logic model assumes autonomy and self-regulation (e.g. plans, self-monitoring) to be among central factors in PA change. In interview talk, autonomy was salient but self-regulatory techniques evoked contradictory responses. The study demonstrates unique contributions of qualitative process evaluation.

15:30 - 17:00

## Preventing sedentary behavior at work: An intervention mapping approach for data-driven mhealth consulting

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Prolonged sitting in the workplace is a risk factor for non-communicable diseases and psychological malfunctioning and should be minimized. The development of a sedentary behavior (SB) intervention will be discussed.

An Intervention Mapping approach was applied to develop a tailored, gamified eHealth intervention to reduce SB. For validating the outcome measurement and completing the problem definition, the "VitaBit" SB monitor was validated and an algorithm for a vitality score was created. The score combines several sitting parameters (e.g., sitting bout durations and their amounts) and will be related to health parameters (e.g. glucose levels). Pilot tests excluding gamification were conducted to adapt the intervention content based on individual needs, while pilot tests for adapting remaining program components and program evaluations are planned.

Compared to observation, the VitaBit monitor detected activity for above 91.2%, while sitting and standing were correctly distinguished for 74.6% to 85.7%. In a free living setting, the activity distributions of the VitaBit corresponded with the ActiGraph. A first intervention pilot showed that psychological support, norm perceptions and knowledge about SB consequences helped to change behavior. A gamification aspect in the intervention was hypothesized to be needed to make behavioral changes sustainable.

SB research (as opposed to physical activity research) is still at the beginning and there is little knowledge about the importance of decreasing SB (e.g. by interrupting sedentary bouts). eHealth promotion and gamification can be used to decrease SB on the long term. This project is a first step to reduce another independent health risk factor.

15:30 - 17:00

## Optimising implementation of the ARK (Antibiotic Review Kit) Intervention: Addressing antibiotic overuse in hospitals

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**Background:** Over-use of antibiotics is a leading factor in antibiotic resistance, a problem that is increasing globally. ARK (Antibiotic Review Kit) is a complex behavioural intervention to support health care professionals (HCPs) in hospitals “review and revise” antibiotics soon after initial prescription. It aims to help HCPs stop unnecessary antibiotics early in the patient’s admission.

**Methods:** The person-based approach was used to develop and optimise ARK and its implementation. Barriers to implementation and ways to address them were identified through iterative stakeholder consultation and qualitative research. These were mapped to the COM-B model and Behaviour Change Technique taxonomy. A mixed-methods feasibility trial was then carried out implementing ARK in one hospital. Quantitative data was collected on rates of “review and revise” and stopping antibiotics. Experiences of implementation were explored in interviews and focus groups with 37 HCPs, which were analysed using thematic analysis.

**Findings:** The feasibility trial demonstrated that the proportion of prescriptions reviewed and proportion stopped increased from baseline to post-implementation (91% (69/76) to 99% (450/457) ( $p=0.0001$ ), and 9% (6/69) to 35% (156/450) ( $p<0.0001$ ), respectively). Qualitative feedback suggested that the ARK intervention was viewed positively. Although several challenges (e.g. difficulties meeting with staff) were identified, HCPs reported various solutions to overcoming these barriers.

**Discussion:** The current research illustrates how the person-based approach can contribute to developing and optimising the implementation of interventions. Findings from the feasibility trial suggest that ARK is a feasible and acceptable intervention. ARK is currently being tested in a cluster-randomised stepped-wedge trial of 36 hospitals.

# Healthy eating & weight

15:30 - 17:00

Michael Daly



15:30 - 17:00

## Barriers and facilitators towards the uptake of the "MIND" diet in a Northern Irish population.

D. Timlin<sup>1</sup>, D.E.E.A. Simpson<sup>2</sup>, P.J. McCormack<sup>3</sup>

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<sup>3</sup>Biomedical Science Research Institute, Ulster University, United Kingdom

**Background:** The aim of the study is to establish facilitators and barriers to the uptake of the MIND diet.

**Objectives:**

- To determine participants perceived capability to the uptake of the MIND diet in 40-55-years old.
- To determine participants opportunity to the uptake of the MIND diet in 40-55-years old.
- To determine participants motivation to the uptake of the MIND diet in 40-55-years old.
- To develop a dietary intervention to promote the MIND diet in 40-55-years old.

**Method:** This is a first phase qualitative study that was used to elicit beliefs surrounding Capability, Opportunity, Motivation and Behaviour (COM-B) with adhering to the "MIND" diet. Capability, motivation and opportunity was further be elaborated into 14 domains, using a more detailed tool to understand behaviour, the Theoretical Domains Framework. (TDF). Twenty-five participants were recruited onto the study, to take part in either a focus group or an interview. Participants are both men and women aged between 40-55 years. Participants were recruited via global university e-mail, Facebook and face to face. The data was analysed using Content Analysis,

**Findings:** From the data collected to date, themes that have emerged include; lack of knowledge of the MIND diet, taste preference, preparation and planning, convenience, access to food, cooking skills, cooking for one and social support.

**Discussion:** Results from this research will inform an appropriate intervention. The TDF has generated an increased awareness of the current situation and has clarified which barriers need to be targeted to improve implementation.

15:30 - 17:00

## Eating three portions of fruit per day. A two-wave TPB-based multi-group study

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<sup>1</sup>University of Padua, Department FISPPA, Italy

The main aim of the study was to test a prediction model grounded on the Theory of Planned Behaviour (TPB; Ajzen, 1991), extended with self-identity as a healthy eater and past behaviour. Self-identity is a salient part of the self-concept specifically relates to a desirable behaviour, such as, in this case, healthy eating. The target behaviour was the consumption of at least three portions of fruit per day. A second aim of the study was to test the invariance of the model in Italian university students and no-student adults.

The research involved 208 university students and 321 no-students and was based on two waves of data collection. At time 1 the questionnaire was made up of measures of all classical TPB constructs, plus measures of past consumption and of self-identity as a healthy eater. Both the affective and evaluative components of attitude were assessed. At time 2, only the target behaviour was surveyed. Data were analysed by means of structural equation modeling that returned good fit indices in any case. Results showed that intention was positively associated with subjective norm, perceived behavioural control, self-identity and past behaviour. Altogether, they explained 78% of the intention variance in the student group, and 81% in the adult group. After controlling for intention, past behaviour – but not self-identity – was significantly related to the self-reported behaviour. The model explained 69% of behaviour variance for students and 62% for no-students. The chi-square difference tests supported model invariance across the two groups.

15:30 - 17:00

## Weight stigma, exercise self-efficacy, and active identity development in higher-weight individuals: A conceptual model

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<sup>1</sup>University of Birmingham, United Kingdom

<sup>2</sup>Central Michigan University, United States

Although many higher-weight individuals engage in regular leisure-time physical activity, an inverse relationship has been observed between body mass index and physical activity levels. Experienced and internalised weight stigma have been linked with reduced exercise enjoyment, motivation, self-efficacy, and participation; however, little is known about how these effects are transmitted. In this conceptual paper, we draw on social cognitive theory and identity theory to propose a dual pathway model via which societal weight stigma impacts on exercise behaviour. In the direct pathway, experiences or threat of explicit and implicit stigma and discrimination create traumatic learning experiences in both youngsters and adults, impairing the development of exercise self-efficacy. In the indirect pathway, an absence of positive representations of fat exercisers, and a glut of negative representations, mean that higher-weight people lack role models from whom they may develop vicarious self-efficacy. Across both pathways, low self-efficacy, in turn, hinders the development of active fat identities. Perceived ability has been linked with exercise identity in both cross-sectional and prospective studies, and a strong exercise identity is, in turn, linked to more frequent exercise, greater future exercise intentions, and perseverance in the face of barriers to exercise. We outline a research agenda, particularly in terms of active fat role models, and discuss how inclusive exercise environments may promote the development of exercise self-efficacy and active identities.

15:30 - 17:00

## Impact of emotion regulation and interoceptive awareness on the development and maintenance of obesity.

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<sup>3</sup>CHRU of Lille, France

**Background:** Despite improvement in treatments available for obese people, obesity is still a central health issue and new ways to understand and treat it are still needed. Emotion regulation difficulties and mood disorders have been identified as risk factors of eating patterns that can lead to overconsumption of food in obesity, such as emotional eating, known as the tendency to eat to alleviate emotions, and externality, known as the tendency to eat in response to food cues. Deficit in interoceptive awareness, known as the ability to identify bodily states and sensations, might also increase risks of obesity by complicating the acknowledgment and differentiation of emotional and visceral sensations. The aim of our study was to examine more thoroughly the impact of emotion regulation, interoceptive awareness, mood disorders and their interconnections on eating patterns involved in obesity, development and maintenance.

**Methods:** We recruited 100 obese patients (BMI>35) to complete self-report questionnaires of emotion regulation (DERS - CERQ), interoceptive awareness (MAIA), mood disorders (BDI 13 – STAI Trait) and eating behaviors (DEBQ- TFEQ ). Relationships between the variables were investigated using partial least squares path modeling (PLS-PM).

**Findings:** A low level of interoceptive awareness predicted the presence of externality and emotional eating in our obese sample. This association between interoceptive awareness and emotional eating was mediated by difficulties in emotion regulation and mood disorders.

**Discussion:** These findings suggest that interoceptive awareness and emotion regulation are relevant co-occurring risk factors of obesity and should be privileged targets of psychotherapeutic interventions.

15:30 - 17:00

## Shifting from meat-based to plant-based diets: A systematic review and integration of current evidence.

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**Background:** A transition towards reduced meat consumption and a more plant-based diet has been called for to address sustainability and health challenges. This review addresses the state of knowledge on the barriers and drivers of change from meat-based to more plant-based diets, as current evidence is still limited, fragmented, and lacking in integration.

**Methods:** A systematic review using PRISMA guidelines was conducted in a set of databases encompassing peer-reviewed publications from multiple scientific disciplines (e.g., Web of Science; ScienceDirect; Scopus; Academic Search Complete; MEDLINE). Search strings included the following keywords: “plant-based diet” OR “meat substit\*”; willingness OR intention. Inclusion criteria included full-text papers in English on empirical (quantitative or qualitative) studies on barriers and facilitators of meat curtailment, meat substitution and plant-based diets. Review, opinion and conference papers, as well as those not focused on consumer choice or behavior were excluded.

**Expected results:** The primary outcome is a list of barriers and facilitators associated with meat curtailment, meat substitution, and adherence to plant-based diets. The secondary outcome is the classification and discussion of these variables according to the COM-B model.

**Current stage of work:** A total of 3205 articles were found, 2602 were retained after removal of duplicates, and 155 were retained after title and abstract screening, which are currently being subjected to full-text screening.

**Discussion:** This review will inform audiences interested in promoting health and sustainability improvements through dietary change. Specifically, it will provide inputs for research and interventions on how to shift from meat-based to more plant-based diets.

# Perceptions of well-being & quality of life across the lifespan

15:30 - 17:00

Lisa Warner

15:30 - 17:00

## Health Care Students' perceptions of Spirituality, Religion and Health: A Mixed Methods Study.

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**Background:** In the past 20 years research interest in psychology, religion, and spirituality (R/S) has increased. R/S impacts physical and psychological health, yet remains an unaddressed healthcare domain. Systematic reviews suggest healthcare quality is enhanced if spiritual needs of patients are addressed. Behaviour change interventions incorporating R/S dimensions have also increased, yet how to support practitioners and students to develop relevant competencies is limited. We explored students' perceptions of the importance of R/S in healthcare, and their confidence and comfort in addressing it before and after attending the European Conference of Religion and Spirituality in Healthcare.

**Methods:** Thirty-one undergraduate healthcare students (of psychology, nursing, dietetic) attended the conference. Participants completed semi-structured reflective diaries and rated themselves on 1-10 Likert scales, before and after the conference, on their perceived importance of R/S in healthcare, their confidence and comfort to address it. Qualitative data were analysed using thematic analysis. Quantitative data were analysed using t-tests.

**Results:** Perceived importance of R/S, confidence and personal comfort to address R/S significantly increased by 11% (95%CI 0.5-1.6), 18% (95%CI 0.9-2.7), 17% (95%CI 0.7-2.8) respectively. Three themes emerged: (1) From interference to integration into practice; (2) Filling the hole in holistic care; (3) The conflict between science and religion.

**Discussion:** Health psychologists seek to deliver whole-person care, however, there is an unaddressed need around supporting the development of competencies to deliver spiritual care. Attendance at an international conference can support the development of competencies and aid understanding around the translation of R/S research findings to practice.

15:30 - 17:00

## Age related health and quality of life differences in general and psychiatric outpatient populations

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<sup>4</sup>Neuronas, Lithuania

**Background:** Success of health promotion, treatment and rehabilitation interventions is measured not only by symptom indicators, but also by improvements in self-rated health (SRH) and of quality of life (QoL). Both SRH and QoL have significant relationship with age. Present analysis aims to reveal QoL and SRH age related trends among general population and psychiatric outpatients with depression and schizophrenia.

**Methods:** This is a new analysis of data was collected within an ongoing Quality of Life Project carried out in WHO Health Promoting Kaunas Region (Lithuania), in cooperation with social partners. Pooled WHO QoL-100 and SRH items data from general population (N5454) and psychiatric outpatients (N748) were compared within 10-year age groups. Contingency tables and  $\chi^2$  were used for statistical analysis.

**Findings:** Outpatients scored lower than general population in all QoL and SRH domains. Overall 51 % of population and 13 % of outpatients evaluated themselves as “healthy”, while their number in both groups decreased with age. Among general population “healthy” respondents decreased from 81.3% to 10.6 % respectively from age 20 to 70, while among psychiatric outpatients from 39.6 % to 5 %.

**Discussion** Consistent age-related reduction of SRH and QoL is observed in mentally ill outpatients. Mental health services when pursuing outcomes should consider not only SRH and QoL gap between patients and general population, but also age trends. Population indicators could provide realistic targets for recovery.



15:30 - 17:00

## Characteristics of adults' quality of life and coping behavior

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**Background:** Health improvement and maintenance are the main conditions of an adult positive development. Healthy lifestyle can be seen as the most desirable health trajectory. In line with healthy lifestyle goes the term health promoting behavior (HPB) that describes behavior improving health and providing better functioning. Intensive psychological and emotional experiences, overwork can negatively affect one's quality of life and decrease health. Discomfort aroused by these factors can be softened by using the coping strategies. In the present work we studied associations of quality of life characteristics and coping strategies of adults with different levels of HPB.

**Methods:** Participants were 89 adults (63 females и 26 males), M(age) – 38,6 years (SD=12,1). Methods used: health status survey SF-36, ways of coping by Lazarus, survey based on the «Health-Promoting Lifestyle Profile «HPLP»» (Walker).

**Results:** Adults with high levels of HPB showed higher scores on healthy lifestyles compared to all other groups. They effectively managed stress situations, used mostly adaptive coping strategies, supporting constructive resolution of the problems. Their scores on quality of life were higher, they showed high life activity. Most preferred strategies in all groups were “planning of problem solving”, “seek for social support” and “self-control”.

**Conclusion:** Study showed that statistically significant differences in associations of quality of life characteristics, parameters of HPB and preferred coping strategies among adults with different levels of health promoting behavior. Responsible attitude to own health and HPB provided higher scores for quality of life.

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15:30 - 17:00

## Does illness perception influences anxiety after 5 years?

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<sup>1</sup>University of Milan-Bicocca, Italy

**Background:** the way a chronic patient thinks about his condition plays a fundamental role in the clinical evolution of CV diseases, including arterial hypertension (HT). Some previous studies suggested that HT is related to a range of psychological characteristics, including anxiety, which could lead to noncompliance with medical treatment. The aim of this study was to evaluate if illness perception dimensions and their variations over time could predict anxiety.

**Design and methods:** a total of 345 outpatients followed by the Hypertension Unit of S. Gerardo Hospital (Monza, Italy) affected by essential hypertension were recruited and assessed at the baseline and a total of 196 at a 5-years follow-up. Patients were asked to complete a battery of psychological questionnaires under the guidance of a psychologist; moreover, anamnestic and clinical data were evaluated. The associations between illness perception domains, clinical risk factors and anxiety were explored using multivariate hierarchical regression analyses.

**Findings:** at t0 the mean age was  $55.40 \pm 11.2$  years. The results from hierarchical regression showed that the variation over time of the HT consequences ( $\beta = 0.233$ ,  $p < .01$ ) and of the disease identity ( $\beta = 0.184$ ,  $p < .05$ ) were significantly and independently associated with anxiety at the follow-up. Furthermore, identity ( $\beta = 0.202$ ,  $p = 0.53$ ) and emotional representation ( $\beta = 0.184$ ,  $p = 0.57$ ) showed a trend that approached significance. These associations with anxiety were independent of clinical risk factors and of the time of the HT diagnosis.

**Discussion:** Current findings may contribute to the development of interventions, targeted on specific domains of illness perception, against the risk of anxiety disorders in HT patients.

# The experience of having a chronic illness

15:30 - 17:00

Erik Taal

15:30 - 17:00

## Disease Experiences of Chilean Women with Sjögren's Syndrome

A. Herrera Ronda<sup>1</sup>, G. Sánchez<sup>1</sup>, I. Espinoza<sup>1</sup>, P. Wurmman<sup>2</sup>, C. Bustos<sup>1</sup>, L. Leiva<sup>3</sup>, R. Geenen<sup>4</sup>, G. Rojas-Alcayaga<sup>1</sup>

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<sup>4</sup>Utrecht University, Department of Psychology, Netherlands

**Background:** Sjögren's Syndrome (SS) is an inflammatory autoimmune chronic disease that affects mainly exocrine glands such as salivary and lacrimal glands and causes a detrimental impact of health related to quality of life. The aim of this study was to summarize illness experiences of Chilean women with SS from the perspective of patients, in an integrated, hierarchical model.

**Methods:** A concept mapping technique was used. A sample of 30 women sorted these experiences by content and filled out a questionnaire regarding the agreement with the statements. A hierarchical cluster analysis was used to structure the experiences. Then, the model was interpreted by a focus group of patients and researchers. Descriptive analyses were used to examine the agreement of patients with these experiences.

**Findings:** Six upper level domains and 10 lower level domains were identified. Symptoms (Mucosal Dryness and Related Symptoms), Social Environment, Emotion's management (Fear and Sadness), Information (Uncertainty, Lack of Knowledge), Coping Strategy (Resilience and Self-care) and Health Staff Relationship.

**Discussion:** Some of the illness experiences of Chilean women with Sjögren's Syndrome are unique and are closely related to specific symptoms of SS but many experiences are common with other rheumatologic disorders. These results are an excellent input to create a specific instrument to assess the impact that causes living with Sjögren patients.

15:30 - 17:00

## Exploring the breast cancer experience amongst women in South Africa who access primary healthcare

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<sup>1</sup>Stellenbosch University, South Africa

<sup>2</sup>University of Bath, United Kingdom

**Background:** Breast cancer remains the leading cause of cancer-related deaths worldwide, and contributes to 16% of cancer-related deaths amongst South African women. In the context of a financially restrained and under-resourced public health care system, we explored women's personal experiences of breast cancer diagnosis and treatment.

**Methods:** We purposively recruited 12 women undergoing breast cancer treatment at a local breast clinic between April and June 2017. Women were recruited as part of a larger study exploring the impact of fatigue on breast cancer. Following procedures for informed consent, women took part in individual semi-structured interviews that lasted on average 44 minutes. Interviews took place in a private room and were guided by an interview schedule in participants' first language. Interviews were analysed thematically using ATLAS.ti v 8.

**Findings:** Three themes emerged; "Universality of the experience", "Faith" and "Agency", which explained women's experiences of diagnosis and treatment. Overall, the experience was emotionally, cognitively and financially burdensome on the individual and her family. Maintaining a strong sense of faith helped women to understand, accept, adjust and cope with their illness. Women demonstrated agency by exerting more control over aspects of their lives which seemed to help them adjust to the experience in a positive way.

**Discussion:** Our findings indicate that South African women share experiences similar to other women living with breast cancer in resource rich environments. However, faith, spirituality and agency presented as crucial components of acceptance, and adjustment. The importance placed on these dimensions should be incorporated into patient-centred care.

15:30 - 17:00

## The Experience of Financial Stress among Emerging Adult Cancer Survivors

S. Gupta<sup>1</sup>, M.C. Mazza<sup>2</sup>, A.M. Marín-Chollom<sup>3</sup>, I.Z. Pervil<sup>1</sup>, M.A. Hoyt<sup>1,2</sup>, T. Revenson<sup>1,4</sup>

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**Background:** Emerging adult (EA) cancer survivors experience stressors unique to their developmental stage, a time of establishing financial and social independence and related to the illness being “off-time” in the normative life cycle (Neugarten, 1975). In fact, younger cancer survivors are more likely to experience financial distress compared to older survivors (CancerCare, 2016). The current investigation uses data from two studies of EA cancer survivors, ages 19-29, to gain rich description of the experience of financial stress after cancer within the developmental context of emerging adulthood.

**Methods:** EA cancer survivor ages 19-29 (N=52; 60% male) with either hematological or testicular cancer underwent in-depth interviews about their cancer experience. Interviews were transcribed verbatim and coded, combining thematic analysis (Braun & Clarke, 2006) with an abductive approach (Timmermans & Tavory, 2012).

**Findings:** Emergent themes included some common to most age groups, including distress regarding medical costs, availability of health insurance, and being a financial burden. Unique to this age group, financial stressors interrupted developmental tasks of emerging adulthood, such as completing an education, establishing financial autonomy, and pursuing intimate relationships. Financial stress influenced independence, identity, and ultimately, psychological well-being. Surprisingly, financial stress was also described as being beneficial by some participants, as it compelled them to mature and appreciate family relationships.

**Discussion:** Financial stress affects well-being for EA cancer survivors in unique ways and intersects with normative developmental tasks. To provide effective support, family members and health practitioners should consider survivors’ developmental stage in caring for them.

15:30 - 17:00

## Death enters the scene in the ICU: Families facing a terminal condition

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<sup>2</sup>São Vicente Clinic, Rio de Janeiro, Brazil

**Background:** Unexpected deaths resulting from acute illnesses or from illnesses that are followed by the aggravation of some underlying disease arise within the family of a patient hospitalized in an ICU, producing instability in the family system. The present study's aim was to examine the manner in which an ICU patient's terminal condition is experienced by the patient's family members.

**Method:** We conducted a qualitative clinical study of 6 family members of terminally ill patients at a midsize private hospital. We employed the content analysis method proposed by Bardin to assess the data we collected via interviews.

**Findings:** 5 analysis categories emerged: perceptions regarding the illness and the clinical progress; the impacts of intensive care hospitalization; perceptions as to the terminal condition; the decision-making process; and the relationship with the medical team.

**Discussion:** An ICU patient's terminal condition involves clinical, family, social, cultural, religious, economic and ethical issues. The patient's imminent death causes the patient's family great distress and suffering, producing intense experiences of helplessness. Anticipatory grief was one of the adaptive behaviors that were adopted by family members, affording a restructuring of the family's resources. The following elements stood out as being essential to a positive terminal experience: empathetic, affective communication; participation in the decision-making process on the part of both the patient and the family; perception that the patient is not suffering; and the presence of religion or spirituality.

15:30 - 17:00

## “I must be strong for my ill son”: adjustment to treatment in hypertrophic cardiomyopathy patients

A. Mierzynska<sup>1</sup>, K. Sadowski<sup>1</sup>, E. Piotrowicz<sup>1</sup>, J. Wolszakiewicz<sup>1</sup>, A. Lech<sup>1</sup>, M. Dąbrowski<sup>1</sup>, M. Kłopotowski<sup>1</sup>, R. Piotrowicz<sup>1</sup>

<sup>1</sup>The Cardinal Stefan Wyszyński Institute of Cardiology, Poland

**Background:** Hypertrophic cardiomyopathy (HCM) is an inherited disease in which the heart muscle becomes abnormally thick, which makes it harder for the heart to pump blood. Some people experience medical complications, including heart failure or sudden cardiac death (SCD). Due to lack of efficient causal treatment the goal of HCM treatment is to relieve symptoms, slow down disease development and prevent SCD.

**Aim:** Aim of this study is to assess illness perception and adjustment to treatment among patients with HCM.

**Method:** The study is randomized control trial (RCT). There are quantitative and qualitative measures used: questionnaires related to general health (GHQ-28), illness perception (IPQ-R), level of stress (PSS-10), adherence to treatment (AT-Q) and semi-structured interviews performed to assess patients' concerns related to illness and treatment. Study population will consist of 60 patients with HCM (cardiac rehabilitation/telerehabilitation vs usual care). Quantitative data will be analyzed using appropriate tests (e.g. t-Student, regression analysis) and qualitative data will be analyzed using Interpretative Phenomenological Analysis.

**Results:** Expected results will verify hypothesis of differences between groups and assess predictors of adjustment to cardiac treatment. Current study group consists of 17 patients (M=53,52; SD=11,19); 12 F/ 5 M. Patients identity of HCM fall along a continuum from “value” to “curse”, their adjustment is influenced the most by “being a role model for family” and “approachable medical team”.

**Discussion:** Adjustment to treatment in HCM patient is mostly related to positive relationship with medical team and need for being a role model for relatives with HCM.



15:30 - 17:00

## Does intelligence and memory associate with anxiety and depression in the sample of IHD patient's?

L. Šinkariova<sup>1</sup>, J. Misiūnienė<sup>1</sup>, R. Petrolienė<sup>1</sup>, L. Alčiauskaitė<sup>1</sup>, L. Zajančauskaitė-Staskevičienė<sup>1</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

**Background:** The results of many studies indicate that people with heart failure show evidence of subtle cognitive deficits as well as a higher prevalence of anxiety and depressive symptoms. However, it is unclear if cognitive dysfunction correlates with mood disorders symptoms. The aim is to find links between ischemic heart disease (IHD) patient's general intelligence and their anxiety and depression.

**Methods:** Study was conducted in Abromiskes Rehabilitation Hospital (Lithuania) during the period of 2014–2016. 116 IHD patients were administered Intelligence Structure test to assess intelligence and short-term memory. Seeking to evaluate anxiety and depression in the beginning and in the end of rehabilitation participants filled Hospital Anxiety and Depression Scale (HADS) two times. Research was supported by Research Council of Lithuania, project No.MIP-081/2014.

**Findings:** Results didn't confirm that depression is correlated with intelligence and short-term memory. Notwithstanding, IHD patients with higher general and visual abilities are significant less anxious in the beginning and in the end of the rehabilitation. Negative link between short-term memory and anxiety is significant in the end of the rehabilitation. Analysis of gender differences confirmed that anxious is negative correlated with visual abilities for woman during all rehabilitation period and with short-term memory in the end of rehabilitation for men.

**Discussion:** Our study confirmed the links between intelligence and anxiety: less anxious men have higher short-term memory and less anxious women – higher visual abilities. It could be assumed that these findings are related with gender differences in the anxiety dynamic during rehabilitation.

# Cognition, mental health, & adaptation to chronic illness

15:30 - 17:00

Christian Borg Xuereb

15:30 - 17:00

## "Shielded from death": the lived experience of Maltese men who have an implantable cardioverter defibrillator

A. Spiteri<sup>1</sup>, C. Borg Xuereb<sup>1</sup>

<sup>1</sup>University of Malta, Malta

An implantable cardioverter defibrillator (ICD) is one of the most effective ways to prevent sudden cardiac death in patients who are at high risk of suffering from ventricular arrhythmias (abnormal heart rhythms). Thus, an ICD is a small electronic device implanted into one's chest which detects abnormal heart rhythms and sends an electric shock to the heart to restore the normal rhythm (Reiffel & Dizon, 2002). This study explored the lived experiences of people who went through an ICD procedure. Data was collected by means of semi-structured interviews, conducted to five male participants over the age of 18. All interviews were transcribed verbatim and analysed using Interpretative Phenomenological

Analysis (IPA). From this analysis, five major themes emerged: 'To live or to die; Life before implantation', "My new life"; Living with the ICD, "Keep calm and carry on"; Coping with the ICD, 'Finding Support' and 'The experience of an Improved Quality of Life: Benefits of ICD?'. This study revealed how after ICD, participants reported an improvement in their quality of life. However, they described negative emotions that arose post-procedure along with the various coping mechanisms used which included optimism, spirituality and overall acceptance of the device. Moreover, social and medical support were deemed as highly important both before and after the procedure. These findings were discussed in light of existing literature regarding the topic. Recommendations for future research in this area are also given.

15:30 - 17:00

## The impact of stigma on self-concept in individuals with concealable chronic illnesses.

A. Habenicht<sup>1</sup>, A. O Donnell<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

Every individual has a varied sense of self-concept, incorporating aspects we are born into (e.g., Irish person), aspects we choose for ourselves (e.g., cyclist), and aspects that are thrust upon us, such as diagnosis of a chronic illness. Previous research suggests that there is an effect of chronic illness on the self-concept, as one acclimates to a new idea of self, incorporating the illness. Similarly, we know that chronic illnesses can have a stigmatising effect, even when they are concealable, but we do not know how stigma impact the self-concept of those with concealable chronic illness. Therefore, this study aims to address the extent to which experienced, anticipated and internalized stigma predict the self-concept of people living with concealable chronic illnesses. Additionally, we aim to determine if the relation between each aspect of stigma and self-concept is mediated by illness identity centrality and salience, and/or moderated by positive aspects of the chronic illness. An online survey will be used to measure stigma, illness identity and self-concept, with the use of chronic illness-specific measures. We will recruit 350 participants with concealable chronic illnesses (e.g., epilepsy, diabetes, asthma, fibromyalgia, chronic fatigue). Our hypotheses will be tested using regression analyses, including mediation and moderation analysis. We expect all facets of stigma to negatively predict self-concept, while positive characteristics will moderate these effects. We also expect that both illness identity centrality and salience will mediate this relation. Overall, this study may contribute to current research on both chronic illness and stigmatised identities more generally.

15:30 - 17:00

## Activity Memories in Asthma: Enhanced Specificity and its Implications

M. Martin<sup>1</sup>, I. Alexeeva<sup>1</sup>

<sup>1</sup>University of Oxford, United Kingdom

**Background:** Overgeneral autobiographical memory refers to the process of retrieval of generic rather than specific autobiographical memories. There is a well-established literature linking overgeneral autobiographical memory to depression, post-traumatic stress disorder and a number of other chronic or recurring conditions. Given the comorbidity between depression and asthma, the question arises whether people with asthma have characteristic memory patterns which may influence the operation of coping strategies such as avoidance. The objective of the current study was to investigate whether there are systematic differences among individuals regarding the content and the type of the autobiographical memories they form.

**Method:** We used cued autobiographic recall in Asthma (N = 60) and healthy (N = 65) participants. Participants were instructed to recall particular past events of physical activity, fatigue, pain, or happiness. Mood, coping styles and asthma symptom levels were also assessed.

**Findings:** Asthma participants recalled more specific than general autobiographical memories of physical activity, compared to healthy controls  $\chi^2(1, n = 126) = 6.88, p = .009$ . For asthma participants more specific activity memories were linked to active coping and positive mood. Reduced specificity was linked to a coping style of denial and a higher frequency of symptoms of bronchoconstriction.

**Discussion:** Asthma individuals' autobiographical memory for physical activity differs from that of healthy people and those with depression. Memory specificity may have developed in asthma as a protective cognitive style that increases resilience against depressed mood and may help to control and manage symptoms, by restricting the use of avoidant coping.

# The many faces of social support & their correlates

15:30 - 17:00

Nina Knoll

15:30 - 17:00

## Seeking support to master cravings during smoking cessation. A daily diary study in dual-smoker couples

P. Schwaninger<sup>1</sup>, J. Lüscher<sup>1</sup>, C. Berli<sup>1</sup>, U. Scholz<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

Smoking cessation is a stressful event and lapses are numerous. Seeking social support, as an active coping strategy to deal with cravings, may help to refrain from smoking. This daily diary study examines associations between daily craving, seeking support, and smoking behaviour in dual-smoker couples around a joint quit attempt.

Overall, 83 heterosexual dual-smoker couples reported on their craving, the extent of seeking social support (asked partner for emotional and practical support regarding smoking cessation), and their daily number of cigarettes smoked in smartphone-based diaries, from a joint quit date on across 22 consecutive days.

Multilevel analyses indicated that on days with higher-than-average levels of craving, male and female smokers reported more cigarettes smoked. For women only we found a within-person interaction between craving and seeking support on smoking. On days with higher-than-average support-seeking, the effect of craving on smoking was attenuated.

For female smokers only, we found a mitigated effect of craving on smoking on days with higher-than-average seeking partner support. This result is in line with different coping styles for men and women. Within-person findings confirm the link between elevated craving levels and more cigarettes smoked in dual-smoker couples. Social support is an important resource in stress and coping processes (stress buffering hypothesis) and crucial to maintain health behaviour change and prevent relapse. Findings emphasize the relevance of support-seeking in women's coping behaviour and the need to understand how exactly individuals seek informal support when they are in need.

15:30 - 17:00

## THE EFFECT OF SOCIAL SUPPORT BEHAVIOURS ON CORTISOL REACTIVITY TO AN ACUTE STRESS TASK

K. Dienes<sup>1</sup>, A. Poh<sup>1</sup>, K. Engel<sup>2</sup>, A. Wearden<sup>1</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>Roosevelt University, United States

**Background:** Support from a romantic partner is associated with improved psychological and physiological responses to stress, but little is known about differences in cortisol reactivity to in relation to the type of support behaviours involved (emotional vs informational, positive vs negative). Using an experimental stress test, we hypothesised: negative support behaviours would increase cortisol reactivity across the TSST; positive support behaviours would reduce cortisol reactivity; emotional support behaviours would lead to a larger decrease in cortisol reactivity than instrumental support behaviours.

**Methods:** 28 participants (21 female, 6 male, 1 transgender), ranging in age from 18 to 33 years ( $M = 21.32$ ,  $SD = 3.13$ ) completed the TSST with a support interaction recorded prior to the task. Salivary cortisol samples were collected at baseline, post-task, and 10, 25, and 40 minutes. Speech samples from the interaction were coded into informational (PI), emotional (PE), total positive (TP), and negative (N) behaviours using the Social Support Interaction Coding Scheme.

**Findings:** Unexpectedly, there was a trend towards higher PI being associated with a steeper rise in cortisol (AUC<sub>G</sub>) and greater total cortisol secretion (AUC<sub>I</sub>), whereas there was no effect of PE. N was associated with a flatter slope of recovery in cortisol secretion.

**Discussion:** Instrumental support is less effective than emotional support for decreasing stress reactivity, and may exacerbate cortisol reactivity. Also, negative support attempts worsen a partners' recovery from a stressor. These findings, if replicated, may inform relational interventions targeting reductions in stress reactivity.



15:30 - 17:00

## A qualitative survey exploring the relationship between companion pets and their owners' health.

M.A. Mulqueen<sup>1</sup>, D.S. Williams<sup>1</sup>

<sup>1</sup>University of Derby, United Kingdom

**Background:** Human-animal relationships have been found to be associated with a variety of factors (for example, emotional support and companionship) that influence an individual's health. Previous research has focused on individuals with health/medical/long-term conditions and medical issues experienced; however, findings have been inconsistent. This research aimed to explore how pet owners perceived the relationship between their health and their companion pets (such as dogs, cats, horses, rabbits, and other small mammals).

**Methods:** Data were collected using an online qualitative survey held in Qualtrics. Responses were collected from 37 participants (1 male and 36 female) aged between 23 - 63 years of age (M=39). Respondents were resident in Ireland (n=8), and the United Kingdom (UK) (n=29). Participants were required to have a companion pet either currently or in the last year. Data were analysed using an inductive thematic analysis from a phenomenological position.

**Findings:** Four themes (and sub-themes) were identified: Health perceptions (individual perceptions, health as an asset, and health as a liability), Purpose (encouraging self-care, a sense of distraction, and why this pet?), Support (relationships, comforting impact of pets, isolating situations, and social situations), and The difficulties we face (underestimated influence and making choices).

**Discussion:** Findings suggest that companion pets play a large role in their owner's lives and have a perceived psychological benefit to their owner's health through their provision of support. This study adds to the growing literature surrounding the impact of animals on health and suggests that companion pets positively impact an individual's perceived health and support.

15:30 - 17:00

## Psychological well-being in persons with multiple sclerosis: The role of social participation and social support

P. Mikula<sup>1</sup>, I. Nagyova<sup>1</sup>

<sup>1</sup>PJ Safarik University, Slovakia

**Background:** The aim of this study is to explore whether social participation and social support are associated with psychological well-being in persons with multiple sclerosis (MS). Social participation as an active component and social support as a passive component of social interactions, are variables which respond well to psychosocial interventions, and thus associations with psychological well-being could contribute to the pool of knowledge regarding good practice in disease management of people with MS.

**Methods:** Data for this cross-sectional study were collected from 101 MS patients (response rate: 73.1%; 74.2% women), who completed the General Health Questionnaire-28 (GHQ-28) for measuring psychological well-being, the Multidimensional Scale of Perceived Social Support (MSPSS), and the Social Participation Scale (P-scale). Multiple linear regressions were performed using IBM SPSS 23 statistical software; controlling for age, gender, education, disease duration and functional disability as measured by Expanded Disability Status Scale (EDSS).

**Findings:** Out of variables under study, only social support ( $\beta=-.29$ ;  $p<0.005$ ) and social participation ( $\beta=.40$ ;  $p<0.001$ ) were statistically significant contributors to the explained variance of the model (18.2%), while age ( $\beta=.00$ ), gender ( $\beta=.03$ ), education ( $\beta=-.06$ ), disease duration ( $\beta=-0.14$ ) or functional disability ( $\beta=-0.16$ ) were not significantly associated with psychological well-being.

**Discussion:** Associations between social support, social participation, and psychological well-being can be utilized in interventions aimed at people with MS either via cognitive-behavioural or self-management support programmes targeted at appraisal of advantages of various forms of social behaviours. [Grant support: APVV-15-0719; VEGA 1/0594/17].

15:30 - 17:00

## Adherence to a psychoeducational group for caregivers of bone marrow transplant patients: a preliminary study

S. Giuliani<sup>1,1</sup>, E. Franchini<sup>1</sup>, M.T. Lupo-Stanghellini<sup>1</sup>, G. Crispino<sup>1</sup>, L. Sarno<sup>1</sup>, F. Ciceri<sup>1</sup>

<sup>1</sup>San Raffaele Hospital, Italy

**Background:** Caregivers of bone marrow transplant patients have high levels of stress, especially during the period of home care (Foxall et al., 1996). However, adherence to interventions, like psychoeducational groups, dedicated to them is still low (Lounsberry et al., 2010). The present study intends to evaluate which factors could facilitate caregivers' participation since distress hasn't been effective in predicting the attendance to psychoeducational groups (Manne et al., 2004).

**Methods:** In January 2017 a psychoeducational group was proposed to 16 caregivers in the post-transplant phase in the Hematology and Bone Marrow Transplantation Unit of San Raffaele Hospital in Milan. Half of them (n=8) decided to participate to the group, while the other half (n=8) didn't. The burden of care of all the 16 caregivers was evaluated before starting the group with a self-administered questionnaire [Caregiver burden inventory CBI (Novak e Guest; 1989)]. The difference of burden of care between the two groups was studied with Mann Whitney test (statistical test SPSS-20).

**Findings:** Significant differences emerged between the groups: participants had higher levels of physical burden (p=.041), which refers to the strain associated with demands on caregivers' physical health; while non-participating caregivers had higher levels of objective burden (p=.0385), which refers to time demands and restrictions that caregiving imposes on them.

**Discussion:** Unlike distress, caregiver burden has been effective in capturing differences between groups. Particular attention should be given to the implications of this data on clinical interventions addressed to caregivers, and future developments of this field.

15:30 - 17:00

## Caregivers of person with young onset dementia: Exploring their perception of an acceptance home-based program

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**Background:** Caregiving of people with young onset dementia (YOD) constitutes a major public health issue and the need to support caregivers has been emphasized. In an interventional research we aimed to evaluate the effectiveness of an integrative home-care program offered to caregivers compared to the usual care. This program was derived from the role transition model and acceptance approach. At this early stage, our objective was to understand the perceived changes of caregivers during this home-care program.

**Methods:** 23 caregivers of patients with YOD participated in the program. Systematic interviews during and following the program were thematically analyzed using QSR N'Vivo 10 software.

**Findings:** The analyses revealed five major themes: (1) focusing on oneself, (2) helping otherwise, (3) ability to talk about, (4) recognizing friends and family and (5) interacting with partner. We observed an increase in perceived well-being (being able to express oneself, to be recognized, to feel supported and valued), a greater acceptance and flexibility (adoption of new strategies, ease of resource mobilisation, highlighting of values, decrease in control) and an improved communication between caregiver and patient with YOD.

**Discussion:** This preliminary study suggests that the transition role and acceptance approach at home may be appropriate for caregivers of patients with YOD. A clinical trial is now necessary to test the effectiveness of such an intervention. Given the cost for a home-based individualised support, such care plan may not be generalizable to all caregivers likely to benefit from it and other intervention strategies may be needed.

# Interventions in cardiometabolic and vascular disease

15:30 - 17:00

Frank Doyle

15:30 - 17:00

## Stroke survivor experiences of a group self-management intervention.

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<sup>2</sup>St Georges' University of London, United Kingdom

**Background:** The UK national clinical guidelines for stroke suggest a self-management approach should be part of rehabilitation. Currently, a one-to-one self-management intervention (SMI) 'Bridges', underpinned by Social Cognitive Theory, is delivered in parts of the UK. Recent research explored whether it could be delivered in a group. MRC guidance suggests acceptability and mechanisms of change should be identified in the early stages of intervention development. Thus, the aim of this study was to explore the acceptability and mechanisms of change that may occur during the group SMI for stroke.

**Method:** Semi-structured interviews explored the experiences of 11 stroke survivors who took part in the four-week group SMI. Purposive sampling from one central London stroke unit was used to recruit a subset of stroke survivors from a larger feasibility study. Interviews lasted on average 50 minutes, were audio-recorded, transcribed verbatim and analysed using thematic analysis.

**Findings:** Four themes were identified: (1) an ongoing journey, (2) carrying on under your own steam, (3) everyone is different, and (4) reciprocity. The mechanisms of change included; shared problem solving, learning, motivation, social comparison, the sharing of experiences and a space where stroke survivors can feel listened to.

**Discussion:** Together these themes contribute to understanding the acceptability and mechanisms of change within the group SMI, and how the intervention aligns with constructs of social cognitive theory, such as self-efficacy, social support, and goal setting. The intervention shows promise and more research is recommended to explore it on a larger scale.

15:30 - 17:00

## Booklet-based intervention for activity, participation, and QOL improvement of stroke survivors: Quasi-experimental designs

K. Miura<sup>1</sup>, K. Takenaka<sup>2</sup>, T. Tsutsumi<sup>3</sup>

<sup>1</sup>Saitama Medical University, Japan

<sup>2</sup>Waseda University, Japan

<sup>3</sup>Osaka University of Human Sciences, Japan

**Background:** Stroke survivors tend to exhibit reduced activity and participation states after discharge, which engender decreased quality of life (QOL). Our earlier studies clarified two points: recommendations from family or friends, one's own experiences, information from medical staff, and the presence of other stroke patients can promote intentions for activity and participation; evaluations of others, feelings of beneficial effects, specific plans (for action and coping), and the presence of supporters can all promote the continuation of activity and participation. Using results of previous studies, we developed a booklet-based intervention. This study of stroke survivors was conducted to clarify changes in activity, participation, and QOL that occur during and after booklet-based intervention.

**Methods:** The intervention was conducted for 24 stroke survivors residing at home (11 men; 73.7±9.9 years mean age; 7.3 years after stroke), who were recruited at a day care rehabilitation facility. The questionnaire surveys were administered before and immediately after, two weeks after, one month after, and three months after intervention. Temporal changes of intention, planning, activity, participation, and QOL were examined.

**Findings:** 'Planning' showed improvement immediately after the intervention. The improvement persisted for three months ( $f=0.65$ ,  $p<0.01$ ). 'Activity and participation' improved significantly over time ( $f=0.61$ ,  $p<0.01$ ). QOL measured before the intervention was significantly different from QOL assessed three months later ( $f=0.43$ ,  $p<0.01$ ).

**Discussion:** Although this study was a quasi-experiment, results suggest that the intervention improved the activity, participation, and QOL of these stroke survivors.

15:30 - 17:00

## Addressing post-stroke cognitive impairment through psychological intervention: Systematic review and meta-analysis of non-randomised interventions

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**Background:** Stroke is a primary cause of death and disability worldwide, leaving a considerable proportion of survivors with persistent cognitive and functional deficits. However, there is no established treatment aimed at improving cognitive function following stroke. Therefore, this systematic review aimed to identify psychological interventions that have been employed to improve post-stroke cognitive function.

**Method:** The authors searched Pubmed, Embase, and PsychINFO through February 2017, for non-randomised controlled studies of psychological interventions aimed at improving cognitive function in stroke survivors. Overall cognition, individual cognitive domains, and activities of daily living were pooled separately for meta-analysis of controlled studies and one group of pre-post studies.

**Findings:** 19,843 abstracts were screened and 20 articles met the inclusion criteria. Meta-analysis indicated an overall moderate effect on cognition across the 7 controlled studies (Hedges'  $g=0.36$ , 95% CI=0.07-0.65). A large effect was found for attention ( $k=3$ ,  $g=0.98$ , 95% CI=0.24-1.72). Similarly, the overall effect on cognition across the 13 one group pre-post studies was moderate (Hedges'  $g=0.53$ , 95% CI=0.31-0.74). Small to moderate effects were found for activities of daily living, attention, memory, and global cognition. However, 6 of the 7 controlled studies had serious risk of bias, whereas all the one group pre-post studies had critical risk of bias by virtue of lack of a control group.

**Discussion:** Evidence for efficacy of psychological interventions to improve cognitive function post-stroke is weak due to the lack of high-quality studies. Further high-quality research comparing psychological interventions with no intervention or active control groups is necessary.



# Employee health and well-being

15:30 - 17:00

Lara Lindert

15:30 - 17:00

## Does perceived transformational leadership style contribute to employee workaholism

M. Morkevičiūtė<sup>1</sup>, A. Endriulaitienė<sup>1</sup>, E. Jočienė<sup>1</sup>

<sup>1</sup>Vytautas Magnus University, Lithuania

**Background:** Literature has shown that work demands created by transformational leaders might be significant for the physical health and psychological well-being of employees. Research has revealed that transformational leadership might contribute to employees' workaholism and subsequent burnout, but the results are inconclusive. The aim of the current study was to investigate the relationship between perceived transformational leadership style and employees' workaholism.

**Methods:** The cross-sectional study involved 250 employees working in different Lithuanian organizations. Perceived transformational leadership style was assessed with the help of Podsakoff, MacKenzie, Moorman, & Fetter (2005) Transformational Leadership Inventory. The 10-item Dutch Work Addiction Scale developed by Schaufeli, Taris, & Bakker (2009) was used for the measurement of workaholism.

**Findings:** The results revealed that there was a significant positive correlation between perceived high expectations of the manager and workaholism. Perceived individualized consideration was related negatively to employees' excessive and compulsive work. Gender, age, work tenure, and position in the organization were not significant for the relationship between transformational leadership style and workaholism.

**Discussion:** The results lead to the conclusion that transformational leadership style might have positive as well as negative effect for employee workaholism that is health-risk factor in occupational context. In future it is important to investigate the factors that may change employees' perception of the manager and working environment in order to prevent health-risk behaviours, such as workaholism.

15:30 - 17:00

## Burnout in Agriculture before the Context of Finance, Health and Interconnection of Family and Farm

L. Reissig<sup>1</sup>

<sup>1</sup>Agroscope, Switzerland

Burnout among farmers is an increasingly frequent topic of discussion in the Swiss agricultural press, although there have been no empirical studies on the phenomenon to date. In 2016, 4000 Swiss Farmers were invited to complete a questionnaire, 1352 usable questionnaires were returned. The aim of which was to investigate the frequency and causes of burnout in the Swiss farming sector. The study shows that burnout affects around 12% of the surveyed farmers. Influencing factors were analysed by applying a multivariate regression analysis. The study is the first to deliver data on the frequency of burnout in farming, and at the same time highlights the need for action – especially the need to recognise burnout at a sufficiently early stage. In conclusion, the predictors of burnout among Swiss farmers appeared to be a bad financial situation, time pressure and lack of free time, work-family-conflict, bad health and bad life satisfaction. The consideration of predicting factors both from private and from professional life succeeds in explaining a really large share of the variance. This shows the multifaceted causes of burnout. It could be confirmed that both the prevalence of relational conflicts, a bad financial situation and a high workload that exerts pressure and prevents breaks remain core predictors of burnout.

15:30 - 17:00

## The association between job-related demands, individual resources and 4 types of exhaustion

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<sup>1</sup>Université Catholique de Louvain - UCL, Belgium

<sup>2</sup>Bright Link, Belgium

**Aim:** Professional exhaustion is consensually considered as the major dimension of burnout and it is often analysed as a unique concept. Few studies have tested the association between psychosocial factors and different subtypes of exhaustion. Relying on the Job Demands-Resources (JDR-C) conceptual model (Demerouti et al., 2001), the present contribution focuses on organizational and individual factors and on how they relate to several subtypes of exhaustion.

**Method:** 269 adult workers (bank, insurance and ICT sectors) answered an online questionnaire (the "Preventing Burnout Test") aiming at detecting, at an early stage, professional stressors (i.e., lack of meaning, work load, ICT demand) and personal resources (i.e., self-esteem, family and friends support) hypothesised to be related with 4 subtypes of exhaustion: energy loss (EL), emotional (EE), physical (PE), and cognitive (CE). Data, controlled for company and general health, were examined through multiple regression analyses.

**Results:** Results show that resources are negatively associated, to some extent, with exhaustion (all p-values < .01): self-esteem is associated with all kinds of exhaustion, and family and friends support with EL and EE. Demands are also associated with exhaustion (all p-values < .05): lack of meaning is positively associated with EL, EE and PE; workload with EL, EE (marginally), and PE; ICT demands with PE and CE.

**Discussion:** This study highlights the added value of discriminating between different types of exhaustion in order to better target which specific resources to promote and which specific stressors to undermine while implementing healthy workplace strategies.

15:30 - 17:00

## Development of a self-coaching scale to assess the effectiveness of coaching interventions

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**Background:** There is growing interest in the application of coaching to a variety of domains such as business, education, and health care in Japan. Individuals, however, often find it financially difficult to hire a professional coach. Self-coaching may be a viable solution to overcoming this issue. Self-coaching is a self-directed activity through which individuals acquire coaching skills to become their own coach, clarify their own goals, and take necessary actions. The present study aims to develop a measurement of self-coaching to assess coaching intervention effectiveness.

**Methods:** Self-coaching scale items were created from our prior study involving 300 adults and from a coaching literature review. An online survey was conducted with 700 Japanese workers, and sociodemographic variables, self-coaching(SC), procrastination, socio-emotional skills(SES), general self-efficacy(GSE), and organization-based self-esteem(OBSE) were measured.

**Findings & Discussion:** The explanatory factor analysis yielded a 23-item four-factor solution termed 'Make free decisions on options for goal attainment', 'Increase and sustain self-motivation', and 'Observe facts and set goals'. To create a brief, easily administered measure, 14 items were selected. Internal consistency indicated sufficient reliability( $\alpha=.87-.91$ ). Self-coaching showed a significant positive association with SES, OBSE and GSE, and a negative association with procrastination. Further, significant differences in the self-coaching scores were observed across job positions. This study implies self-coaching promotes individuals' goal attainment, social adaptability and performance. The self-coaching scale appears to be an adequate measure for coaching intervention.

# Individual differences in coping & treatment in medical contexts

15:30 - 17:00

Corline Brouwers

15:30 - 17:00

## Temporal proximity of behavioural outcomes and motivations for positive health behaviour

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<sup>1</sup>University College Cork, Ireland

**Background:** The Consideration of Future Consequences scale (CFC) measures the extent to which individuals consider the short- or long-term outcomes of behaviour. High CFC-Future subscale scores indicate greater consideration of future outcomes, whereas high CFC-Immediate subscale scores indicate greater consideration for short-term outcomes. Tailoring persuasive messages to emphasise short- or long-term behavioural outcomes has been shown to increase intended cancer screening for high CFC-Immediate and CFC-Future scorers respectively. An individual's motivation for current engagement in healthy behaviour may also be temporally situated, and congruent with their CFC score. However, no research to date has explored this possibility.

**Methods:** Participants (n = 725) completed the CFC and reported engagement in four healthy behaviours: exercise, smoking cessation, sleep, and oral hygiene. Those who reported intentional engagement in each behaviour were provided with a list of behaviour-specific motivations (half of which were proximal and half distal) and instructed to identify their primary motivations. Participants were grouped according to the temporal proximity of motivations; proximal or distal. Differences in CFC scores between groups were examined using multivariate analyses of variance.

**Findings:** For all behaviours, individuals who selected a distal motivation as their primary motivation scored significantly higher in CFC-Future than those who selected a proximal motivation, whereas those who chose a proximal motivation scored significantly higher in CFC-Immediate than those who selected a distal motivation.

**Discussion:** The results indicate that high CFC-Future and CFC-Immediate scorers are differentially motivated to engage in healthy behaviours. This has implications for health promotion and designing behavioural interventions.

15:30 - 17:00

## Psychosocial factors characterizing people who participate or not to screening prevention programs in Italy

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<sup>2</sup>Centro Cardiologico Monzino, Italy

**Background:** Both risk factor screening and screening for early detection of disease, or secondary prevention, are important to improve health giving screeners lifestyle advices or allowing them to detect disease early so that more effective treatments can be offered and prognosis is improved.

The aim of this study is to assess health screening behaviour of a sample of Italians and evaluate psychological (or psychosocial) factors associated with low uptake of screening tests.

**Methods:** A sample of 433 males and 757 females recruited via Facebook were asked to fill in questionnaires about their socio-demographic profile, psychosocial characteristics and the kind of health-preventive initiatives they usually apply for.

**Findings:** Screening activity is positively correlated with age and physical activity, and negatively correlated with depression, anxiety and perceived stress and it is more frequent in females. In the female sample, screening activity is positively correlated with social support, while in males, it is negatively correlated with working hours per week, smoking and type D personality.

**Discussion:** The most significant result of this study shows that the presence of depressive symptoms, anxiety and perceived stress reduce the incidence of screening behaviours in the general population, thus increasing the risk of developing illnesses. Depression, anxiety and stress are also known to be important risk factors for severe illnesses, including, but not limited to, cardiovascular and oncologic diseases. Put together, these evidences suggest the urgent need to develop new screening campaigns specifically targeted to people with psychological disorders with a particular attention to the male population.



15:30 - 17:00

## The role of eating motivations in dietary habits of adolescents with different bodyweight

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<sup>2</sup>University of Szeged, Department of Behavioral Sciences, Hungary

**Background:** Appropriate eating habits in adolescence is very important to avoid later illnesses and weight problems. Eating motivations impact dieting behaviours in different ways. In our study we aimed to explore adolescents' eating motivations. We hypothesized variances divided by bodyweight (underweight, normal, overweight). Furthermore, we thought these motivations play different roles in dietary habits.

**Methods:** Participants were 374 adolescents (48.4% boys; mean age: 16.4 years, SD = 1.5) in Hungary. To assess eating behaviours we conducted factor analysis for exploring frequency of eating different types of foods with a self-administered questionnaire. We specified motivations using The Eating Motivation Survey. Performing one-way ANOVA we compared eating motivations in groups separated by bodyweight. Applying Pearson's correlation we detected relationships between eating motivations and eating behaviours in these groups.

**Findings:** Groups differences were detected in the motivation scores of "liking", "need" and "hunger", "tradition", and "weight control". Unhealthy dieting was related to "liking" in underweight group, and to "visuality", "social image" and "social norms" in overweight group. Healthy dieting correlated positively with "health" in the normal weight group, and negatively with "sociability" in the overweight group.

**Discussion:** Motivations played different roles in dietary habits based on bodyweight. Adolescents with normal weight are motivated to maintain health. While extrinsic motivations promoted unhealthy dieting, intrinsic motivations were not related to health conscious behaviours among adolescents with weight problems. Moreover, social habits without peer effects impacted unhealthy eating habits in this group. Understanding these motivations could help in the prevention of weight problems in adolescence.

15:30 - 17:00

## Cancer survivors and return to work: the influence of workload

M. Saramago<sup>1</sup>, F. Lemetayer<sup>1</sup>, C. Catunda<sup>1</sup>

<sup>1</sup>University of Lorraine, France

**Background:** An increasing number of people surviving the cancer led more and more often to assist them in order to return to active working life. However, work is an important part of the life quality of patients; it is both a source of income and "return to a normal life" (Rolin et al, 2014). This period may be accompanied by a sense of vulnerability that can lead to burnout (Bézy, 2013).

The main objective of this research is to identify what stressors affect burnout among adults with past cancer and compare these results with those obtained by adults without past cancer.

**Method:** 378 adults : 78 affected by a history of cancer (clinical group) and 200 without cancer experience (control group) will respond to different questionnaires measuring burnout (emotional exhaustion, cognitive weariness, physical fatigue), workload, work-family conflict, anxiety and depression.

**Findings:** Compared to adults without past cancer adults survivors of cancer get higher scores of emotional exhaustion, cognitive weariness, physical fatigue and global burnout ( $p < .05$ ). Moreover in a clinical group, anxiety predicts significantly all facets of burnout ( $p < .01$ ). Workload and depression affect cognitive weariness ( $p < .01$ ). These trends are not found in the control group, indeed only anxiety predicts emotional exhaustion ( $p < .05$ ).

**Discussion:** These findings show the difficulties among adults facing return-to-work after a cancer. Moreover anxiety, workload and depression seem to be important in this process. This study should have implications for prevention and intervention programs that focus on stressors to support people to improve return-to-work process after cancer.

# Stress: sociocultural factors and specialist populations

15:30 - 17:00

Beata Basinska

15:30 - 17:00

## Mindfulness, stress and well-being in Bulgarian socio-cultural context

S. Karabeliova<sup>1</sup>, B. Zarbova<sup>1</sup>, R. Geneva<sup>1</sup>

<sup>1</sup>Sofia University "St. Kl. Ohridski", Bulgaria

The main purpose of the current study is to test the validity of the Five Facet Mindfulness Questionnaire (FFMQ) in the Bulgarian socio-cultural context, as well as to investigate the relationship between Mindfulness, Well-being and Stress. There are 544 respondents (99 male, 394 female), aged between 21 and 70 ( $M=41.24$ ;  $SD=10.4$ ). The methodology of the study consists of the Five Facet Mindfulness Questionnaire (FFMQ), the Perceived Stress and Perceived Control (PSPC-14), and the Scale of Well-being (COMPAS-W). Confirmatory factor analysis (CFA) was used to verify the factor structure of our instruments. Six factors were discovered in the FFMQ: Observing ( $\alpha=.777$ ), Describing ( $\alpha=.897$ ), Nonjudging of inner experience ( $\alpha=.789$ ), Nonreactivity to inner experience ( $\alpha=.682$ ), Acting with awareness, which can be divided into two factors – Acting with awareness ( $\alpha=.819$ ) and Focus on detail ( $\alpha=.747$ ). The PSPC-14 presented two factors: Perceived Stress ( $\alpha=.860$ ) and Perceived Control ( $\alpha=.843$ ). Women had higher scores than men on the scale of Observing, but lower on the scales: Nonjudging of inner experience, Nonreactivity to inner experience, Acting with awareness and Focus on detail. Moreover, Observing and Acting with awareness increases with age. The respondents with low-risk jobs scored higher on the Observing scale. Mindfulness was positively correlated with Perceived Control and Well-being, and negatively with Perceived Stress. The results of this study extend on the literature regarding the effects of Mindfulness on Well-being. Future studies could focus on exploring the role of Mindfulness as a mediator in the interaction between Stress and Well-being.

15:30 - 17:00

## Multitasking predicts psychosomatic complaints in hematologists and oncologists – a study on work stress

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<sup>1</sup>University Hospital Cologne, Germany

Studies have shown that a high demand of multitasking leads to health issues. So far, mainly effects on psychological health have been verified. Prior studies did not focus on physical health outcomes as well as the professional group of hematologists and oncologists. The research question was as follows: Is the physical health of established hematologists and oncologists influenced by multitasking?

A survey on 157 established hematologists and oncologists served as a data base. Subsequently the influences of multitasking, sociodemographic and practice related factors on physical health were investigated in multiple linear regression analyses. The categories (1) emotional exhaustion, (2) stomach trouble, (3) pain in the limbs and (4) heart complaints from the Gießener Health Complaints Questionnaire served to measure the physical health status.

99.4 percent of the surveyed hematologists and oncologists faced multitasking during their work. Little to moderate effects were found for the association between multitasking and stomach trouble ( $R^2 = 0.083$ ), pain in the limbs ( $R^2 = 0.038$ ), and emotional exhaustion ( $R^2 = 0.154$ ). Gender was validated as a significant predictor of stomach trouble (Beta = -0.197;  $p < 0.05$ ).

Most of the explained variance could be found within emotional exhaustion. However the low explained variance in the other categories indicates that further influencing factors exist, which were not considered in this study. Above all, there is a need for more longitudinal studies to reveal causalities of possible factors influencing the physical health of established hematologists and oncologists. Job-related, research-based measures should be implemented to improve physicians' health.

15:30 - 17:00

## Perceived stress and strain among students– A comparison between distance-learning and on-campus universities

M. Drüge<sup>1</sup>, L. Fritsche<sup>1</sup>, J. Apolinário-Hagen<sup>1</sup>, J. Kemper<sup>1</sup>, L. Krings<sup>1</sup>, S.D. Groenewold<sup>1</sup>, C. Salewski<sup>1</sup>

<sup>1</sup>University of Hagen, Germany

**Background:** Since Bologna has reformed the international academic degrees, university students report a considerably high amount of stress and strain. However, most of the existing data was collected among traditional on-campus students, and only little is known so far about the situation of the growing number of distance-learning students. Therefore, the present study aimed at comparing both student groups with regard to their stress perception.

**Methods:** The study was conducted in a cross-sectional design. Data was collected online using measures of the HISBUS (a survey conducted by The German Centre for Higher Education Research and Science Studies). The sample consisted of 5642 distance-learning students (women: 61 %) and was compared to data of on-campus students (Ortenburger, 2013) (n=8958; women: 47%), using chi<sup>2</sup>-tests and odds ratio (OR).

**Findings:** Overall, distance-learning students reported significantly less perceived stress ( $p < .001$ ). More specifically, they expressed stronger feelings of stress due to their work (i.e., part time job), but less perceived stress related to their studies (e.g. demands), to social contacts (e.g. friends), and to health issues (e.g. chronic diseases) (all  $p < .001$ ) than on-campus students.

**Discussion:** The results point to different stress patterns of distance-learning and on-campus students. Despite some limitations of the study (e.g. data collection, comparability of the data sets), still the findings are noticeable and underline the need of tailored interventions for students from different types of universities.

15:30 - 17:00

## Gender and age differences in stress, health resources, and health outcomes among distance-learning students

L. Fritsche<sup>1</sup>, M. Drüge<sup>1</sup>, J. Apolinário-Hagen<sup>1</sup>, J. Kemper<sup>1</sup>, L. Krings<sup>1</sup>, S.D. Groenewold<sup>1</sup>, C. Salewski<sup>1</sup>

<sup>1</sup>University of Hagen, Germany

**Background:** In recent studies, increased stress levels and a rise of stress-related problems have been found among on-campus students. Since little is known about stress and health of distance-learning students, the present study aims at exploring gender and age differences in stress, health resources, and outcomes in this group.

**Methods:** Through a cross-sectional research design, 5642 distance-learning students (female: 60.8%; younger students: <30 years: n=1495; older students: ≥50 years: n=850) were surveyed online using scales assessing perceived stress, health resources (coping strategies, self-efficacy), and health outcomes (medical and mental complaints, physical activity). To identify gender and age differences and also interactions, two-way analyses of variance were performed.

**Findings:** The results revealed main effects for gender and age. With regard to gender, women reported more perceived stress, coping strategies, and medical and mental complaints (all  $p < .001$ ), but less self-efficacy ( $p < .05$ ) than men. Concerning age, younger students reported more perceived stress and medical and mental complaints (both  $p < .001$ ), but less coping strategies, self-efficacy (both  $p < .001$ ), and physical activity ( $p < .05$ ) than older students. Also, two interactions were found. In younger students, women were significantly less self-efficient and physical active than men (both  $p < .05$ ), but not in older students.

**Discussion:** Results support gender and age differences in stress, health resources, and health outcomes in distance-learning students and thus a specific pattern of stress and health outcomes. Therefore, this study points to the need to develop and implement health-promoting interventions for this group.

15:30 - 17:00

## Comparative analysis of daily stressors and preferred coping strategies among men and women

I. Murtazina<sup>1</sup>

<sup>1</sup>Saint Peterburg State University, Russia

**Background:** In the recent years study of stress turned from the investigation of major life events to daily stress, including occupational, family, financial problems, that impact daily functioning. Lazarus described them as minor, less intensive, more continuous stressors that can cause effects more severe than major life events. Most research nowadays is concentrated on occupational and family stressors while stressors in different spheres are highly understudied.

In the present study we compared frequencies and structure of perceived daily stressors and identified associations of perceived stress, daily stress and coping-strategies in men and women.

**Methods:** Participants were 334 adults aged 20-65 (M=37.8; 118 males, 216 females).  
**Methods used:** daily stress questionnaire (Petrash); Perceived stress scale (Ababkov), Ways of coping (Lazarus), demographic survey.

**Results:** Comparative analysis showed that in all spheres women had higher scores of daily stress. Common for men and women were high scores on occupational stressors, bad weather, lack of time for leisure activities and stressors related to appearance. Men also were concerned about financial issues, women – about relatives' problems. Analysis revealed higher perceived stress for women was associated with use of "confronting", "seek for social support", "accepting responsibility", "escape", while men in this case used only "seek for social support".

**Conclusion:** Study showed that men and women differ not only in the daily stressors, perceived stress and preferred coping strategies, but also in their associations. The mechanisms found underline that high daily stress is supported by different behavioral strategies in men and women. Supported by RFH 16-18-10088



# New directions in researching self-regulation in health & illness

15:30 - 17:00

Emily Hennessy

15:30 - 17:00

## The Impact of Implicit Theories of Health on Maintaining New Year's Resolutions

M. Schreiber<sup>1</sup>, V. Job<sup>2</sup>, S. Dohle<sup>1</sup>

<sup>1</sup>University of Cologne, Germany

<sup>2</sup>Technische Universität Dresden, Germany

**Background:** Implicit theories of health are peoples' beliefs about the extent to which their own health is dynamic and malleable or static and fixed. According to this perspective, people hold one of two health-related implicit theories: an incremental theory, i.e. that health is changeable and predominantly shaped by one's own behavior, or an entity theory, i.e. that health is largely predetermined. The purpose of this study was to examine the relationship between implicit theories of health and health-related new year's resolutions.

**Methods:** In an online study, participants (N=201) were asked to state their new year's resolutions and to indicate how confident they were to realize these resolutions. Implicit theories of health were measured using a 6-item questionnaire (e. g. "You can change your own health status considerably",  $\alpha=.87$ ). In a follow-up study one month later we measured confidence and perseverance for realizing their resolutions.

**Findings:** As expected, results revealed a positive relationship between implicit theories of health and confidence ratings ( $p<.01$ ). Participants who perceived their own health as malleable were more confident to reach their health-related new year's resolutions. In addition, a positive relationship between implicit theories measured in the follow-up and confidence and perseverance ratings were found ( $p<.01$ ).

**Discussion:** The findings of the study suggest that beliefs about the changeability of one's own health can influence confidence expectations in reaching one's own health goals and lead to more perseverance in reaching those goals. These results may guide public health interventions designed to encourage a healthier lifestyle.

15:30 - 17:00

## Inner Health Picture as a mental model of self-regulation in 7-8 year old children

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<sup>1</sup>The Herzen State Pedagogical University of Russia, Russia

Inner Health Picture (IHP) is a mental model that allows a child to describe himself as a healthy person. It is formed in a child at preschool age as a result of their family's psychological situation. The aim was to assess how this mental model contributes to a child's self-regulation.

The survey involved 60 7-8 year old children. Working memory level was estimated using a technique where three series of subjects familiar to the child were presented on the monitor in a different order. The child had to click on an object that hadn't been pressed. The number of correct reactions in three presentations and interference were estimated. In the reflexometry in the training series, where the stimuli were presented at the same interval, the child first learned to press the "space" key when circles of different colors appeared, and then in the experimental series, where the intervals had a fractal basis, acted in the "go-go" paradigm. The reaction time for presentation of stimuli and the number of errors were estimated. Regression analysis highlighted that the higher the level of IHP formation, the higher the recall level of stimuli in the first presentation, the shorter the reaction time in the training series and the fewer errors in the experimental series. Consequently, the mental model that allows a child to describe himself as a healthy person is part of a self-regulation mechanism that improves the effectiveness of a child's schooling.

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15:30 - 17:00

## A new measure of defensive reappraisal opens new horizons for understanding self-regulation processes

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"Defensive processing" of health messages is triggered subconsciously in an attempt to regulate negative emotional reactions elicited by threatening messages. While a certain amount of negative affect is important for motivating healthy behaviors, excessive distress can prioritize emotional regulation needs and diminish protective behaviors. A subtle defensive process found useful in processing threatening health information and keeping negative emotional arousal at moderate levels is reappraisal – thinking about the information in a subtle yet justifiable different way that attenuates the emotional reaction and enhances adaptive behavioral responses. Despite its major importance, the scientific study of reappraisal is extremely limited due to measurement difficulties: most research compares threatened vs. non-threatened groups while ignoring individual differences in using this adaptive coping style; and the available individual-level measures of reappraisal rely on self-report scales, which are inadequate for measuring the mainly subconscious process. We will present a new implicit (concealed) measure of individual differences in health-related defensive reappraisal, based on a novel approach involving the calculation of intra-personal correlations between risk and illness perceptions across illnesses. We found supporting data for the reliability and validity of the measure in a series of studies. We will present the rationale for the new measure, data regarding its development, and findings on the moderating role of health-specific reappraisal tendencies on the association between levels of threat and a range of emotional, cognitive and behavioral responses to threatening health messages. We will conclude with a discussion of potential theoretical understandings and new practical opportunities enabled by the new measure. The new measure is expected to lead to breakthroughs in understanding psychological defensiveness in general, and defensive reactions to threatening health information in particular.

15:30 - 17:00

## Do yoga and meditation moderate the relationship between negative life events and depression?

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<sup>1</sup>University of Technology Sydney, Australia

<sup>2</sup>Kliniken Essen-Mitte, Faculty of Health, University of Duisburg-Essen, Germany

**Background:** Yoga and meditation have been gaining popularity worldwide. While benefits have been reported for physical and mental health, the mode of action is vastly unknown. Previous research has suggested that yoga/meditation may act via the reduction of stress, one of the major risk factors for depression. Therefore this study aims to determine whether yoga/meditation moderates the relationship between negative life events and depression.

**Methods:** The Australian Longitudinal Study on Women's Health (ALSWH), a cross-sectional study, surveyed 8009 women aged 34-39 years regarding depression symptoms (CESD-10), perceived stress (PSS), negative life events (e.g. death of family members, violent experiences), social support (DSSI), yoga/meditation use, and physical activity in the last year. Mediator and moderator analyses were conducted to examine the influence of selected variables on the relationship between negative life events and depression, using the "Process" macro for SPSS and procedures recommended by Hayes.

**Findings:** Stepwise analyses revealed that perceived stress partially mediated the association between negative life events and depression. Social support moderated the paths life events - stress, and stress - depression, while no such moderation was found for yoga/meditation. Instead yoga/meditation use was found to moderate the direct path between negative life events and depression. Contrary to yoga/meditation use no such moderating effect was found for physical activity.

**Discussion:** This study found that yoga/mediation use did not influence depression through the stress path, instead yoga/mediation was found to dampen the influence of negative life events on depression directly. More research on the mechanisms of yoga are warranted.

15:30 - 17:00

## Perceptions of diet, eating control, and self-efficacy in the process of weight reduction.

A. Januszewicz<sup>1</sup>, A. Luszczynska<sup>2</sup>

<sup>1</sup>SWPS University of Social Sciences and Humanities, Poland

<sup>2</sup>University of Social Sciences and Humanities, Poland

**Background:** The common method for weight loss, a modification of diet, brings considerable difficulties. First off, the research indicates a problem with persistence in sticking to recommended diets (Dansinger et al., 2005). Studies suggest that the type of modification of diet may be responsible for these issues (Dansinger, 2005; Baumeister et al., 2000). Westenhoefer (1994) showed the rigid and flexible control of eating behavior predict patterns and determine if weight loss is successful and maintained. The aim of this study was to evaluate the relationships between the perceptions of dietary modifications aiming at weight reduction, the type of control used to regulate eating behaviors, symptoms of eating disorders, eating habits, body weight, and quality of life.

**Methods:** 210 adults attempting to lose weight participated in the longitudinal study with two measurement points (with a time gap of 3 months between the measurements). Questionnaires and objective measurements of weight and body composition were used.

**Findings:** The results show that the perception of diet and type of eating control explain the level of body weight, eating habits, and symptoms of eating disorders. These associations between self-efficacy, and quality of life and eating habits was also found.

**Discussion:** The findings suggest that the perceptions of dietary modifications may be associated with persistence in using respective dietary recommendations and with the development of symptoms of eating disorders.

15:30 - 17:00

## The “natural” as embodied metaphor - its role in therapy choice and self-regulation

S. Zorgo<sup>1</sup>, A. Zana<sup>1</sup>

<sup>1</sup>Semmelweis University, Hungary

**Background:** The “natural” is employed in marketing products/services including food, cosmetics, and various complementary and alternative medicine (CAM) therapies. Conflating “natural” and “healthy” is salient, yet this relation differs from a desired control over nature propagated by industrialization. The “natural” signifies a complex metaphor mirroring social trends, and the associated images exert a strong influence on health behavior. The paper examines what this disposition tells us about the psychological and sociocultural aspects of therapy choice and self-regulation.

**Methods:** Results are based on anthropological fieldwork (participant observation and in-depth interviews) spanning a period from January 2015 to May 2017 at four clinics of Traditional Chinese Medicine in Budapest, Hungary. Participant observation involved 105 patients (males N=42); semi-structured interviews were conducted with patients (N=9) and practitioners (N=9). The interviews were coded with Interpretative Phenomenological Analysis; all information was aggregated employing Atlas.ti software.

**Findings:** Narratives equating the “natural” with health circumscribe the notion via mutually constructive affirmatory (“natural”) and inverse images (“unnatural”). Affirmatory images comprise purity, trustworthiness, and harmlessness spurring CAM use, while inverse images include pollution and attack with specific references to consumerism, pharmaceuticals, and biomedical procedures.

**Discussion:** The panoply of images reveals an embodied response to stimuli (positive/attractive and negative/repulsive valences), a key factor in decision-making. Furthermore, the disposition may indicate distrust in social institutions and/or expert knowledge, and a response to global trends in a milieu of information proliferation. A deeper understanding of this disposition offers insight into lay decision-making processes that may guide healthcare communication policies and practices.

# Medication & adaptation in older adults with chronic conditions

15:30 - 17:00

Deborah Owen



15:30 - 17:00

## HIV testing in people age 50+: a qualitative study of patients' and clinicians' perspectives

E. Youssef<sup>1</sup>, J. Wright<sup>1</sup>, V. Delpech<sup>2</sup>, K. Davies<sup>1</sup>, A. Brown<sup>2</sup>, V. Cooper<sup>3</sup>, M. Sachikonye<sup>4</sup>, R. de Visser<sup>1</sup>

<sup>1</sup>Brighton and Sussex Medical School, United Kingdom

<sup>2</sup>Public Health England, United Kingdom

<sup>3</sup>University College London, United Kingdom

<sup>4</sup>UK Community Advisory Board (UK-CAB), United Kingdom

**Background:** In the UK, people age 50+ are less likely to be offered HIV tests by clinicians and as a result, new infections continue to rise. This study examined patient- and clinician-related factors associated with HIV testing in people age 50+.

**Methods:** Semi-structured interviews were conducted with 20 patients aged 50+ diagnosed late with HIV: age range 52-80, (mean=60); 80% white; 55% heterosexual. Interviews were also conducted with 20 clinicians involved in their care prior to their HIV diagnosis: 50% from a medical speciality; 35% from a surgical speciality; 15% from acute/emergency medicine. Interview transcripts underwent Thematic Analysis.

**Findings:** Four themes identified were common to both groups.

**Knowledge:** Most patients had outdated HIV knowledge. Clinicians had partial knowledge based on informal education.

**Stigma:** Both groups felt that generic HIV-related stigma was intensified among older people, with more intense moral judgement around their (risky) sexual activity.

**Risk perception:** Both groups had sometimes inaccurate perceptions that older people were less at risk of HIV than other more obvious "high risk" groups such as homosexually active men.

**Symptom attribution:** Both groups attributed symptoms in the older group to something other than HIV, often age-related conditions. This was closely related to the perception of low HIV risk in older age.

**Discussion:** Among patients and clinicians, poor knowledge fed into stigma, inaccurate risk perception, and uncertainty around symptom attribution - all of which could lead to delayed testing and treatment.

15:30 - 17:00

## Potentially serious alcohol-medicine interactions among community-dwelling older adults: a national cohort study

C. Keeney<sup>1</sup>, A. Holton<sup>1</sup>, P. Dillon<sup>1</sup>, P. Gallagher<sup>1</sup>, G. Cousins<sup>1</sup>

<sup>1</sup>RCSI, Ireland

**Background:** Older adults are vulnerable to adverse effects from the concurrent use of alcohol and prescription medications. The aim of this study was to determine the prevalence of potentially serious alcohol–medication interactions among older adults.

**Methods:** Design: Nationally representative cohort study. This abstract focuses on baseline data.

**Participants:** Community-dwelling older adults (aged >65), presenting to one of 197 Community Pharmacies in Ireland.

**Measures:** Consecutive patients were invited to complete a structured interview assessing demographics, beverage-specific quantity and frequency alcohol measures, and health-status (including self-rated health and number of comorbidities). Interviews were linked to patient dispensing records for the 12-months prior to interview. Medicines known to result in potentially serious alcohol-interactions were identified from dispensing records. Analysis was conducted using STATA 15.0.

**Results:** Of the total sample (n=1779, 45% male), 67% drank in the past year, with 24% engaging in heavy-episodic drinking, and 12% exceeding weekly recommended limits. Men had a greater propensity for both heavy episodic drinking (37 vs 14%, p<0.001) and consuming over the weekly recommended limits (18 vs 7%, p<0.001), relative to women. Almost 1-in-4 (24%) participants were at-risk for a potentially serious alcohol-medication interaction. Men (OR 2.27, 95% CI 1.77-2.90, p<0.001), those aged 65-70 (OR 1.62, CI 1.23-2.32, p<0.01) and those taking 5-or-more medications (OR 2.54, CI 1.89-2.80, p<0.001) are at increased risk of a potentially serious alcohol interaction.

Older adults have a high propensity for potentially serious drug-alcohol interactions. At-risk patients can be identified at the point-of-prescribing, prioritizing alcohol-screening and brief alcohol intervention in this group.

15:30 - 17:00

## Reablement for older persons by an interprofessional home rehabilitation team: An ongoing RCT

M.L. Elfström<sup>1</sup>, G. Östlund<sup>1</sup>, E. Anbäcken<sup>1</sup>, V. Zander<sup>1</sup>, L. Gustafsson<sup>1</sup>

<sup>1</sup>Mälardalen University, Sweden

The aim is to evaluate the effects of intensive home rehabilitation regarding multidimensional health perceptions and other quality of life domains, physical ability and capacity among older people (65+). The design is a randomized controlled study of a reablement intervention with controls receiving traditional home care. The intervention is goal- and user oriented, home-based, time limited (3 months), and organized by an interprofessional team consisting of the professions nurse, enrolled nurses, physiotherapists, social worker, and occupational therapists. The effects of the intervention are measured by self-reported health and quality of life (EQ-5D-5L, HACT) including psychological well-being (GP-CORE), physical capacity (SPPB, hand dynamometer test), activity performance (COPM), and home care hours needed. Data are collected at inclusion (T1; applying for home care), after the three months intervention (T2), and at six months (T3). Primary outcome analyses will be performed according to intention to treat; 2 x 3 mixed design (group x time) ANCOVA with each dependent variable at T1 as covariate. Based on a medium effect size in favour of the intervention in the pilot study, and a dropout of 20%, the power calculation indicated that 240 persons should be included. The project will contribute with evidence of the effects of interprofessional home rehabilitation for reablement, and consequences for older persons' bio-psycho-social health. The project is ongoing with more than 120 persons included. The intervention may result in reduced costs for care, but especially individual gains in relation to reduced care needs, maintained independence and good health.

15:30 - 17:00

## The Instrumental-Expressive Social Support Scale - validation in a sample of older adults

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<sup>4</sup>Laboratório de Reabilitação Psicossocial- FPCE-UP, Portugal

<sup>5</sup>Universidade do Minho, Portugal

<sup>6</sup>Life and Health Sciences Research Institute (ICVS), School of Health Sciences, Portugal

Social support is a major determinant of health in all stages of the life cycle, but particularly important in older age. The aim of the study was to adapt and validate a social support scale: the Instrumental-Expressive Social Support Scale, in a sample of older individuals.

Participants were 964 community-dwellers, aged between 64 and 99 years old (M= 74,4), who completed the Instrumental-Expressive Social Support Scale, The Reported Adherence to Medication Scale and the Positive and Negative Affect Schedule. The sample was randomly divided in two groups. The first group was used as a calibration sample, to study the number of factors underlying social support through Principal Axis Factoring (PAF) and the second group as a validation sample, to test the “best fit” model via Confirmatory Factor Analysis (CFA) and study the associations between social support and affect and adherence to medication.

Results from PAF showed a three factor structure, which was confirmed by CFA. The factors were similar to pre-existing dimensions in the original instrument and showed high values of internal consistency. They were named as Sense of control ( $\alpha = 0.900$ ), Financial support ( $\alpha = 0.802$ ), Familiar and Socio-Affective Support ( $\alpha = 0.778$ ).

CFA showed acceptable fit ( $\chi^2/g.l = 5.418$ ; CFI = 0.903; NFI = 0.884; RMSEA = 0.098). Significant associations were also found between the three dimensions of social support and negative affect and adherence to medication.

This instrument constitutes a useful and valid measure for the assessment of social support in older adults.

# Delivery of patient care & health promotion

15:30 - 17:00

Lisa Mellon

15:30 - 17:00

## High incidence of diagnostic error of endometriosis in Australia, Canada, Ireland, Romania, and the UK

A. Bontempo<sup>1</sup>, K. Ognyanova<sup>1</sup>, L. Mikesell<sup>1</sup>

<sup>1</sup>Rutgers University, United States

**Background:** Endometriosis is a reproductive disease resulting in pain, infertility, and considerable physical and psychosocial dysfunction. Endometriosis affects at least 10% of women, yet its etiology is unknown and there is no known cure. The profound diagnostic delay of endometriosis (M = 10 years) warrants study into its diagnostic error (DE) rates; thus, the aim of this research was to establish DE rates for five countries and by whom DE was made.

**Methods:** Participants were 200 women with endometriosis from Australia, Canada, Ireland, Romania, and the UK, who participated in a cross-sectional online research study. DE incidence and by whom DEs were made were obtained from single-item questions. Frequency analysis was performed.

**Findings:** 93.9%, 84.2%, 80.0%, 66.7%, and 92.2% of women reported being misdiagnosed in Australia, Canada, Ireland, Romania, and the UK, respectively. The majority of DEs were made by general practitioners (61.8%, 50.8%, 53.3%, 12%, and 51.9%, respectively) and gynaecologists (35.5%, 45.8%, 30%, 64%, and 50%, respectively), whereas a minority were made by endometriosis specialists (8.8%, 8.5%, 0%, 0%, and 0%, respectively) and other healthcare providers (23.5%, 10.2%, 13.3%, 4%, and 7.7%, respectively).

**Discussion:** The incidence of DE in this online endometriosis sample is much higher than the estimated incidence of DE in medicine in general (10-15%). The long diagnostic delay cited in prior research supports this increased incidence. Unveiling the high incidence of DE in endometriosis is critical to provide the necessary motivation to provide more extensive training to healthcare providers—especially gynaecologists—in the recognition of endometriosis.

15:30 - 17:00

## Adverse Childhood Events and Health Service Utilisation in Later Life: a primary care-based study.

L. Mellon<sup>1</sup>

<sup>1</sup>Royal College of Surgeons in Ireland, Ireland

Adverse childhood events (ACE) are associated with an increased risk of developing chronic diseases later in life. Whether a history of ACE results in increased health service use (HSU) is unclear as the relationship is subject to potential confounding factors, including those chronic diseases. Our aim was to examine the association between ACE and HSU using data from a primary care-based study.

We analysed cross-sectional data from a population based cohort of people recruited from a large primary care centre. ACE was measured using the Centre for Disease Control ACE questionnaire. Health service use in the previous 12 months (number of primary care consultations and hospital discharges) was extracted from electronic medical records. Negative binomial regression was conducted, adjusting for predisposing (age, sex), enabling (education, social class) and need factors (multimorbidity, Body Mass Index, and self-rated health).

HSU data were available on 2026 participants. Overall, 23.4% reported a history of ACE. Adjusting for predisposing, enabling factors and need factors, there was a significant relationship between an overall history of any ACE and primary care consultations in the previous 12 months (IRR = 1.13, 95% CI 1.01-1.29). Examining the different categories of ACE, the strongest relationship was observed between a history of physical, emotional or sexual abuse and primary care consultations (IRR=1.16, 95% CI 1-1.34).

ACE has been conceptualised as a need factor which may influence HSU. Our results suggest that ACE impacts on frequency of primary care consultations, and this relationship may be mediated through need factors such as multimorbidity.

15:30 - 17:00

## What UK healthcare practitioners know about HPV and implications for training

S. Sherman<sup>1</sup>, C. Cohen<sup>2</sup>, H. Patel<sup>3</sup>

<sup>1</sup>Keele University, United Kingdom

<sup>2</sup>Jo's Cervical Cancer Trust, United Kingdom

<sup>3</sup>University of Leicester, United Kingdom

**Background:** Human papillomavirus (HPV) is a common sexually transmitted infection implicated in 5% of cancers. Since 2008 there has been a vaccine available in the UK that is administered to girls aged 11-13. HPV testing is also being incorporated into the NHS cervical screening programme. Patel et al (2016) conducted a survey of nurses in Leicestershire and identified various gaps in their knowledge. This extended survey will evaluate UK-wide knowledge about HPV, the vaccine and the changes to the screening programme in healthcare practitioners who provide HPV vaccination, HPV and smear testing or advice.

**Methods:** Participants recruited from a database held by Jo's Cervical Cancer Trust will complete an online survey covering demographics, level of experience, HPV knowledge, HPV primary testing and Test of Cure (TOC) knowledge, HPV vaccine knowledge, attitudes towards the HPV vaccine and self-perceived adequacy of HPV knowledge. The data will be analysed with correlation coefficients, Chi square and Kruskal–Wallis tests.

**Expected results:** Generally good understanding of HPV and the vaccination but with crucial gaps in knowledge around the impact of HPV on men as well as gaps in detailed knowledge of the NHS HPV testing processes.

**Current stage of work:** The survey has received ethical approval from Keele University and will be distributed by March 2018.

**Discussion:** Significant stigma and distress have been reported associated with cervical screening and HPV testing, it is vital healthcare practitioners are well-informed in order to alleviate these issues. The survey will evaluate current training and identify ongoing training needs.



15:30 - 17:00

## Co-creating research priorities for childhood obesity prevention research: Uniting research, practice and policy

M. Hennessy<sup>1</sup>, M. Byrne<sup>1</sup>, R. Laws<sup>2</sup>, J. Mc Sharry<sup>1</sup>, G. O'Malley<sup>3,4</sup>, C. Heary<sup>5</sup>

<sup>1</sup>Health Behaviour Change Research Group, School of Psychology, National University of Ireland Galway, Ireland

<sup>2</sup>School of Exercise and Nutrition Sciences, Institute for Physical Activity and Nutrition, Deakin University, Geelong, Australia

<sup>3</sup>Division of Population Health Sciences, School of Physiotherapy, Royal College of Surgeons in Ireland, Dublin, Ireland

<sup>4</sup>Association for the Study of Obesity on the Island of Ireland, Ireland

<sup>5</sup>School of Psychology, National University of Ireland Galway, Ireland

**Background:** Childhood obesity is a prominent global health issue yet research priorities are not yet established. Co-production of priorities leads to research which may be more translatable to the domains of policy and practice. The aim of this study was to co-create priorities for childhood obesity prevention research and barriers and facilitators to knowledge translation.

**Methods:** Nominal group technique, involving consensus-building with national and international researchers, policymakers and practitioners, was used during workshops over a two-day national obesity conference in May 2017.

**Findings:** Seventy-seven delegates participated in ten nominal groups on day one. Each group generated areas for future research and their top three priorities were identified. On day two, a group of 14 key stakeholders discussed, clarified and amended the 26 knowledge gaps identified, and participated in two further rounds of voting to rank their top five priorities. The top-five research priorities identified were: (1) Evaluate (including economic evaluation) current programmes to inform practice and policy; (2) How to change culture towards addressing the determinants of health; (3) Implementation science: process; (4) How to integrate obesity prevention into existing service structures; (5) How to enhance opportunities for habitual physical activity, including free play and active travel. A wide range of barriers and facilitators to knowledge translation were determined.

**Discussion:** The co-produced research priorities may help to shape the research agendas of funders and researchers, and aid in the conduct of policy-relevant research and the translation of research into practice in childhood obesity prevention.

15:30 - 17:00

## Goal-setting in DAFNE: Educators' perspectives on the implementation of goal-setting techniques within diabetes self-management education.

M. Fredrix<sup>1</sup>, M. Byrne<sup>1</sup>, J. Mc Sharry<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** Diabetes self-management education (DSME) programmes have evolved from information-provision based programmes to patient-centred and collaborative education programmes, that typically implement behaviour change components such as goal-setting and action-planning. While educators are crucial to the effectiveness of DSME, limited research has explored educators' views on the operationalisation of these types of behaviour change components. Therefore, this study aims to explore educators' perspectives on the implementation of goal-setting strategies within a structured type-1 DSME programme.

**Methods:** Ten semi-structured interviews were conducted with DSME-educators delivering the 'Dose Adjustment for Normal Eating' (DAFNE) programme throughout Ireland. A pre-designed topic-guide focussed on assessing educator's experiences of the delivery and practical application of goal-setting strategies within DAFNE and general DSME, and exploring their perspectives on the quality and usefulness of goal-setting strategies within DAFNE and DSME. The interviews were recorded and transcribed. The transcripts were analysed using thematic-analysis.

**Findings:** Five major themes were identified: People need a plan, the power of the group, diversity and individuality, goal-setting's fit and challenges of delivering behaviour change components

**Discussion:** This study offers an in-depth exploration of DSME-educators' perspectives on the utilisation of goal-setting techniques within DSME. While educators saw benefits in the implementation of goal-setting and planning strategies, concerns about how well goal-setting currently fits within DSME and follow-up care were evident. Many educators highlighted that the current lack of following up with people after DSME, could possibly hinder goal-achievement. Additionally, many educators experienced the delivery of goal-setting strategies as challenging and would value additional training opportunities.

# Health Risk Communication and Decision Making

15:30 - 17:00

Daisy Bradbury

15:30 - 17:00

## Barriers and facilitators to discussing child weight with parents: A meta-synthesis of qualitative studies

D. Bradbury<sup>1</sup>, A. Chisholm<sup>2</sup>, P. Watson<sup>1</sup>, C. Bundy<sup>3</sup>, N. Bradbury<sup>4</sup>, S. Birtwistle<sup>1</sup>

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<sup>3</sup>University of Cardiff, United Kingdom

<sup>4</sup>University of Worcester, United Kingdom

**Introduction:** Childhood obesity is one of the most serious global public health challenges. However, obesity and its consequences are largely preventable. As parents play an important role in their children's weight-related behaviours, good communication between parents and Health Care Professionals (HCPs) is essential. This systematic review provides a meta-synthesis of qualitative studies exploring the barriers and facilitators experienced by HCPs when discussing child weight with parents.

**Methods:** Searches were conducted using the following databases; Medline (OVID), Psych INFO (OVID), EMBASE (OVID), Web of Knowledge and CINHALL. 13 full-text qualitative studies published in English language journals since 1985 were included. Included studies collected data from HCPs (e.g. nurses, doctors, dieticians, psychologists and clinical managers) concerning their experiences of discussing child weight-related issues with parents. An inductive thematic analysis was employed to synthesise

**Findings:** Emerging sub themes were categorised using a socio-ecological framework into intra/inter-personal factors, organisational factors and societal factors. Perceived barriers and facilitators most commonly related to intra/inter-personal level factors i.e. relating to staff factors, parental factors or professional-parent interactions. HCPs also attributed a number of barriers, but not facilitators, at the organisational and societal levels.

**Discussion:** The findings of this review may help to inform the development of future weight-related communication interventions. Whilst intra/inter-personal interventions may go some way to improving health care practice, it is crucial that all stakeholders consider the wider organisational and societal context in which these interactions take place.

15:30 - 17:00

## Couples experience of a mastectomy for breast cancer and thoughts regarding breast reconstruction decision-making

K. Lamore<sup>1</sup>, C. Flahault<sup>1</sup>, L. Fasse<sup>2</sup>, A. Untas<sup>1</sup>

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<sup>2</sup>Laboratory Psy-DREPI (EA 7458), University of Burgundy, France

**Background:** Treatment decision, as breast reconstruction (BR) in cancer treatment, is taken with family support and often with partners help. To our knowledge, only one retrospective study investigated couples decision-making experience toward BR. The aim of this mixed study is to explore couples experience and adjustment to breast cancer treatment. A second aim is to explore how BR decision-making is considered one month after the mastectomy.

**Methods:** Five women who had a first diagnosis of breast cancer and their partners were recruited before the mastectomy in three hospitals/clinics in France. Questionnaires were filled-out by couples before the mastectomy, evaluating dyadic coping (DCI), emotions(POMS), need for information (PINQ) and partners' influence in treatment decision-making. The month after the mastectomy, an open interview was proposed to investigate the daily subjective experience of these couples. Interviews were subjected to an Interpretative Phenomenological Analysis and the results were then linked to questionnaires data. For this method, less than 10 interviews are required as individual's experience is deeply explored.

**Findings:** Four main themes arose from the data: (1) disease as a new course of one's life, (2) relationships with health providers, (3) role and difficulties encountered by partners and (4) concerns on BR. The interpretative story is linked to couples' relationship history. Furthermore, questionnaires answers provide insight into couples' relationship. Participants who express difficulties during the interview need more information and express more negative emotions.

**Discussion:** These results underline difficulties couples can experience, especially in BR decision-making. Clear information on BR is needed at diagnosis.

15:30 - 17:00

## Getting (Not) What You Expect: Responses Towards Unexpected, Multiple Health Risk Feedback

L.J. Debbeler<sup>1</sup>, J. Kollmann<sup>1</sup>, N. Lages<sup>1</sup>, H. Szymczak<sup>1</sup>, H. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

Reactions towards health risk feedback are critical for initiating and maintaining health promoting behaviour, since feeling personally at risk is a core motivation for life-style changes. Previous studies demonstrated that people are not only passive recipients responding to the valence of the given risk feedback but that they process risk information according to their pre-feedback beliefs. However, previous studies focused on single risk indicators, while in real-life health settings, feedback about multiple risk indicators is common. Therefore, the present study examines the impact of pre-feedback expectancies and receiving multiple risk information (cholesterol, blood pressure readings) on post-feedback responses in a community health screening.

The majority of participants received either consistent positive (n = 204) or mixed (n = 352) risk feedback concerning the two risk factors. Only 129 participants received consistent negative feedback. Importantly, when risk feedback was consistent with pre-feedback expectancies, participants expressed worry and vulnerability in relation to the feedback valence; negative feedback induced higher worry and vulnerability, indicating relative accuracy. Compensatory effects between non-matching multiple risk feedback were not observed. Conversely, when feedback and pre-feedback expectancies diverged, pre-feedback expectancies were more important than risk feedback for responses.

To sum up, in the context of multiple health risk feedback, consistency between pre-feedback expectancies and feedback seems to be more deceiving than consistency between the provided multiple risk feedback information. Therefore, taking expectancies and feedback valence into account when communicating personalized health risk in real life might be critical to provide matched information and support.

15:30 - 17:00

## Nurses announcing the start of replacement therapy: towards a better shared decision-making in nephrology

C. Vioulac<sup>1</sup>, F. Amiour<sup>2</sup>, L. Tricot<sup>2</sup>, S. Homs<sup>2</sup>

<sup>1</sup>Paris Descartes, France

<sup>2</sup>RENIF (Nephrology Network in Ile de France), France

**Background:** French guidelines emphasize the need for a specific time for announcing the need to start replacement therapy in Chronic Kidney Disease (CKD). The aim of this consultation is to inform patients regarding replacement therapy and help them in their future choice. In this context, the RENIF network (Nephrology network in the Parisian region) has developed a project to implement these specific consultations in nephrology and dialysis centres. This project follows two aims: 1/ help CKD patients in their treatment choice; 2/ unite existing measures and identify nurses' needs in this practice.

**Methods:** Nephrology centres in the Parisian region were included in the project and their existing practices regarding announcement consultations were evaluated. Consultation tools were created and nurses involved in the project received a Patient Education training. Their needs were evaluated using satisfaction surveys. Patients' treatment choices were reported.

**Expected results:** These measures should provide nurses with new tools to conduct the consultation and help patients in their decision-making.

**Current stage of the work:** Eighteen centres are currently involved in the project, with 791 patients concerned. Satisfaction surveys highlighted two main needs for nurses: 1/ a lack of knowledge regarding the different treatments existing; 2/ difficulties dealing with complex situations with the patient during the consultation.

**Discussion:** This project allows a better harmonisation in the patient-nurse consultations in these centres and help bringing the patient back in the centre of this decision-making. Specific training sessions have been proposed to the nurses to answer to their needs.

# Rapid Communications

15:30 - 17:00

Room 202, Concourse

David Hevey



15:30 - 17:00

## Validation of the Wagnild y Young resilience scale in the context of adolescent residencial care

A. Gonçalves<sup>1,2</sup>, A. Camarneiro<sup>1</sup>

<sup>1</sup>Nursing School of Coimbra, Portugal

<sup>2</sup>Universidade do Porto, Portugal

**Background:** Residential care can provide protection for adolescents by promoting the development and the maintenance of their resilience.

**Objective:** To validate in a sample of adolescents in residential care the Resilience Scale (RS) of Wagnild and Young (1993) adapted for Portuguese by Felgueiras, Festas and Vieira (2010).

**Methodology:** Methodological study, validation of RS from previous Portuguese adaptation, in a sample of 384 adolescents in residencial care.

**Results:** The RS, of 25 items, presented high internal consistency ( $\alpha = 0.925$ ). The construct validity showed a two-factor solution (personal competence and acceptance of self and life), according to the original proposal, evidencing some differences in the allocation of items. In adolescents, personal competence correlates positively and significantly with age. Boys are significantly more resilient (total and dimensions) than girls. This difference was taken as a discriminating validity.

**Conclusion:** This Portuguese version of the scale has many similarities with the original version and is distinguished from the published Portuguese versions. Allows research on resilience in adolescent in residencial care.

15:30 - 17:00

## Social predictors of vegetable consumption and nudging for change

M.A. Claassen<sup>1</sup>, V. Broers<sup>2</sup>, O. Luminet<sup>2</sup>, S. Van den Broucke<sup>2</sup>, O. Klein<sup>1</sup>, O. Corneille<sup>2</sup>

<sup>1</sup>Universite Libre de Bruxelles, Belgium

<sup>2</sup>Université Catholique de Louvain, Belgium

**Background:** Eating behaviours are influenced by the eating practices of others. Descriptive norms, information about other's behaviour, are effective tools at increasing vegetable consumption. Preliminary evidence suggests that descriptive norms might increase positive taste expectations. The aim of our studies was to examine the influence of descriptive norms on intentions, consumption, and taste experience of vegetables.

**Methods:** First, a questionnaire was administered (N=472) assessing normative beliefs regarding vegetable consumption by asking the extent to which the participant's family, partner, or friends are supportive of their vegetable consumption. Second, based on the results of the questionnaire, 150 students participated in a study in which they were subjected to a descriptive norm in support of a vegetable choice (vs. fruit norm vs. control). Participants were then asked to make a choice between a vegetable vs. fruit basket and to participate in a bogus taste test examining taste experiences of vegetables.

**Findings:** Linear regressions showed that intentions and consumption of known vegetables were not influenced by normative beliefs regarding consumption of these vegetables. However, intention to consume more of unknown vegetables was predicted by increased perceptions of other's beliefs that vegetable consumption is important. Data collection for the experimental study is underway.

**Discussion:** Determinants predicting intentions for and consumption of known vs. unknown vegetables are distinct. Descriptive norms seem to be a tool that can be useful at increasing consumption of vegetables that are not habitually consumed. Interventions aimed at diversifying vegetable intake could thus use descriptive norms as an environmental nudge.

15:30 - 17:00

## The use of mobile device applications to support medication adherence: a systematic review with meta-analysis.

L. Armitage<sup>1</sup>, K. Kassavou<sup>1</sup>, S. Sutton<sup>1</sup>

<sup>1</sup>University of Cambridge, United Kingdom

**Background:** Suboptimal medication adherence remains a global challenge to disease control and patient wellbeing. Smartphones and tablet computers are now near-ubiquitous. This review aims to determine the effectiveness of mobile device applications to support medication adherence and identify intervention characteristics and Behaviour Change Techniques (BCTs) which may be associated with the effectiveness of a mobile device application.

**Methods:** This review employed a systematic search of MEDLINE, PubMed, PsycINFO, CINAHL, Embase and Web of Science for randomised controlled trials (RCTs) investigating the use of a mobile device application to support medication adherence. After removal of duplicates, 6329 titles and abstract were independently screened, from which 83 papers were further examined in full text. Seven RCTs met the eligibility criteria and were included in a random effect meta-analysis. Those eligible RCTs were coded for the BCTs utilised.

**Findings:** People who use a mobile device application to support them in taking their medication are almost twice as likely to achieve medication adherence in comparison to those not receiving such intervention (OR 1.8). Common BCTs utilised by mobile device applications include Prompts and Cues, Tailored, and Monitoring of Behaviour Without Feedback. People were also commonly required to report whether or not a behaviour was performed (taking their medication as prescribed).

**Discussion:** Mobile device applications provide an important public health opportunity to improve adherence to medications and facilitate medications in achieving their therapeutic potential. We recommend large scale provision of a standardised medication adherence application to support people in this area of their care.

15:30 - 17:00

## Men's drive for muscularity and well-being: the role of sexual orientation and psychosocial variables

C. Matera<sup>1</sup>, A. Nerini<sup>1</sup>, C. Stefanile<sup>1</sup>

<sup>1</sup>University of Florence, Italy

**Background:** This study aimed to examine predictors and outcomes of men's body dissatisfaction, controlling for sexual orientation. Media and peer influences (in terms of teasing, appearance conversations with friends, and peer attributions) were hypothesized to predict men's body dissatisfaction, which was considered as a predictor of drive for muscularity and psychological well-being (PWB). The mediational role of athletic internalization and social comparison was examined.

**Methods:** a cross-sectional study was conducted with 385 Italian men (mean age = 28.61). Participants completed a questionnaire assessing the research variables. Path analysis was performed.

**Findings:** Sexual orientation was linked to men's body dissatisfaction, which in turn was associated to drive for muscularity and PWB. Media pressures were associated to men's body dissatisfaction (through athletic internalization and social comparison), to PWB, and to drive for muscularity (via body dissatisfaction). Appearance conversations predicted body dissatisfaction via athletic internalization and social comparison, while peer attributions only through social comparison. Teasing was directly associated to body dissatisfaction. All peer influence variables predicted men's drive for muscularity. Peer attributions were directly associated with PWB, while appearance conversation and teasing predicted PWB through body dissatisfaction. The model had a very good fit to the data (Chi<sup>2</sup>=27.50 p=.09; Chi<sup>2</sup>/df =1.45; CF =.99; NFI=.98; IFI=.99; SRMR=.03; RMSEA=.03)

**Discussion:** These findings allow to gain a better understanding of the relationship between sexual orientation, sociocultural influences and men's body dissatisfaction, which can help to increase the early identification of risk factors that could lead to dysfunctional behaviors and hamper men's PWB.

15:30 - 17:00

## Can we reduce missed appointments in primary care? A population-level intervention in a General Practice.

E.R. Bull<sup>1</sup>, S.L. Bull<sup>2</sup>

<sup>1</sup>University of Manchester, United Kingdom

<sup>2</sup>PPG in NHS Birmingham CrossCity Clinical Commissioning Group, United Kingdom

**Background:** Missed appointments (MAs) in primary care reduce healthcare availability, with significant public health impacts. MAs also exacerbate health service pressures. This pilot study drew on social influence theory and research to test if positive behaviour change strategies at the Practice population level could reduce patients' MAs and become embedded in routine practice.

**Methods:** Three strategies were implemented over 12 months in a large General Practice (12,000 patients, average 4748 appointments/month). Waiting room posters emphasised social norms for desired behaviours (e.g. percentage of patients attending appointments, replacing those highlighting MA figures). Likewise, when booking appointments, receptionists (n=15) were trained in inviting patients to actively commit to cancelling if needed, and writing down their appointment details. Monthly routinely collected MA and cancellation data were compared with baseline averages using t-tests. A knowledge quiz and semantic differential questionnaire explored staff experience during implementation.

**Findings:** Mean MAs and cancellations per month differed significantly from 6-month baseline means [MAs  $t(11)=-6.15, p<.001$ ; cancellations  $t(11)=3.637, p=.004$ ]. On average, there were 37.67 fewer MAs per month (20%), and 102.66 more cancellations (21.07%), although this varied. There were also significant differences between the 6 baseline months and seasonally equivalent intervention months [MAs,  $t(5)=-4.65, p=.006$ , cancellations  $t(5)=3.263, p=.022$ ]. Staff identified several implementation barriers and facilitators.

**Discussion:** This pilot's results suggest that this low-intensity public health intervention drawn from psychology can feasibly reduce missed appointments in a General Practice patient population over 12 months. Receptionists' accounts pointed to variability in fidelity and suggested ways to embed and scale positive strategies sustainably in healthcare practice.

# Methodological applications to health

15:30 - 17:00

Willam Day

15:30 - 17:00

## The importance of mixing methods: Qualitative interviewing elucidates findings in laboratory stress testing with children

T. Cheetham<sup>1</sup>, J. Turner-Cobb<sup>2</sup>, H. Family<sup>3</sup>

<sup>1</sup>University of Southampton, United Kingdom

<sup>2</sup>Bournemouth University, United Kingdom

<sup>3</sup>University of Bath, United Kingdom

**Background:** The primary aim of the study was to replicate earlier research that developed and tested the Bath Experimental Stress Test for Children (BEST-C).

**Methods:** In this mixed methods study, 34 participants (19 boys and 15 girls) aged 7-11 years old completed questionnaires (life events, daily hassles, coping strategies), the BEST-C, gave biological samples (salivary cortisol and heart rate), and a brief structured interview about their experience of the task. Quantitative data was analysed using MANOVA, correlations, and ANOVAs. Qualitative data was analysed using thematic analysis.

**What went wrong:** Although there was an increase in cortisol in anticipation of the stress test, there was no increase in cortisol in response to the BEST-C. This finding was contrary to prior research which found that the BEST-C induced a stress response in children.

**Possible solutions:** Examination of the post-stress test interviews allowed for the researchers to establish an explanation as to why the stress test was not as effective as in previous research. The interviews indicated that the presence of a researcher who the child had previously met (during interviews in another study) acted as a powerful buffer of stress as it provided a coping resource (social support).

**Conclusions:** The use of a follow-up interview with participants post-stressor has been a useful addition to the BEST-C, unique to this paradigm. Without this interview, it would not have been possible to develop this understanding of the quantitative findings of the study, highlighting the importance of using mixed methods in stress testing research.

15:30 - 17:00

## A Foucauldian-inspired discursive Media Framing Analysis of the UK's "employment and support allowance" welfare benefit.

W. Day<sup>1</sup>, R. Shaw<sup>1</sup>, D. Shepperd<sup>1</sup>

<sup>1</sup>Aston University, United Kingdom

**Background:** Employment and support allowance (ESA) was introduced in 2008 by the Labour government. Replacing Incapacity Benefit, ESA provides financial support to individuals unable to work due to illness or disability. Eligibility for the benefit is determined through the Work Capability Assessment (WCA). This presentation explores the way in which these welfare reforms have been reported by the UK press, focussing on the implications for individuals living with chronic conditions.

**Methods:** This research introduces a novel, systematic, approach to collecting data corpora for a Foucauldian-inspired discourse analysis. Through a modification of the Media Framing Analysis framework, texts from three "newspegs" (events from the benefit's history) were collected in line with PRISMA guidelines. Time periods covered by the newspegs include the introduction of ESA; the extension of the WCA in 2010 and the impact of Ken Loach's 2016 film "I, Daniel Blake". Data was analysed using Foucauldian-informed discourse analysis.

**Findings:** Identified discourses reveal constructions of illness and disability as temporary states; justifying individuals' subjection to "support and resources" which seek to regiment experiences of illness. Neologies such as "worklessness" apportion individual blame along a divide of "citizenship". In contrast, counter-discourses position individuals as vulnerable "victims" of both the state's power and poor luck.

**Discussion:** Examination of these discourses allows an understanding of the subject positions "made available" for those living in the UK with chronic conditions. These findings will inform future empirical work, as we aim to explore the experiences of individuals who claim welfare whilst living with chronic illness.



15:30 - 17:00

## Exploring the collaboration between health psychology and user-centred design in intervention design

T. Dekkers<sup>1</sup>, M. Melles<sup>1</sup>, H. de Ridder<sup>1</sup>

<sup>1</sup>Delft University of Technology, Netherlands

Novel technologies such as artificial intelligence and virtual reality open up new possibilities for intervention design. While these are exciting, applying advanced technology under so-called technology push raises the concern that developed interventions lack usability and user-friendliness, which would be detrimental to adoption and retention. The current work reflects on the potential of interdisciplinary collaboration between health psychologists and user-centred designers to improve intervention design. Specifically, we explored how designers applied psychological theory in the design process.

Five design engineering student teams received introductory training in health psychology and developed a concept intervention based on psychological theory (e.g. improve rehabilitation adherence using the theory of planned behaviour) in 10 weeks. The students' reports and reflective practice were used to identify themes.

The interventions all incorporated psychological theory and included concepts for smart wearables and mHealth product-service systems. We identified three themes: (1) formative focus, which concerns the designers' focus on formative qualitative methods and usability testing rather than validation, (2) role of constructs, which describes how constructs, rather than the overall theory, informed design choices, and (3) communicating theory through design, which describes how designers used graphic design, contextual framing, and prototypes to communicate the theory itself.

These findings highlight opportunities for future collaborations between health psychology and user-centred design that go beyond improving usability. First, involving both parties may balance the focus between formative and summative research. Second, the visual artefacts that are created to adopt theory may also be beneficial for implementation, which should be further explored.

15:30 - 17:00

## Toward an integrative theoretical and measurement model of patients' and providers' attitudes to their relationship

M. Genet<sup>1</sup>, F. LHEUREUX<sup>1</sup>, D. Truchot<sup>1</sup>

<sup>1</sup>University of Bourgogne Franche-Comté, France

**Background:** This study is about attitudes actors of the healthcare system have about the patient- provider relationship (PPR). A critical review of current models and measures revealed that nine features of the PPR (e.g. shared decision making, importance of psychosocial issues) are associated with different attitudes. Furthermore, these dimensions can be viewed as reflecting a second-order factor, opposing a traditional approach (e.g. paternalistic, disease focused) to a more recent perspective (e.g. autonomy-based, person focused). However, neither this 9-factor structure was empirically observed nor a suited measurement scale was available to date.

**Methods:** A preliminary 126-item version of a new scale was devised, a large part of them being translated/adapted from existing tools to measure one of the 9 theoretical factors. 630 French participants (providers such as physicians or nurses and users of the healthcare system) replied to this version. Then, a second sample of 734 volunteers from several associations of professionals or patients, and from three universities replied to a reduced and refined 40-item version. They were asked to rate their agreement on a 5-point Likert scale.

**Findings:** Results from exploratory and confirmatory factor analyzes illustrate the relevance of the 9-first-order factor plus a second-order factor structure ( $SB\chi^2/df = 3.34$ , CFI = .90, SRMR = .071, RMSEA = .056). Furthermore, internal consistency coefficients were satisfactorily (>.60).

**Discussion:** This new framework may help to better account for the impact of the wide array of PPR-related attitudes on behaviors during consultations, on care satisfaction, therapeutic adherence and on the quality of life of both protagonists.

15:30 - 17:00

## The bright side of dark introjection: an overview on conceptualisations and operationalisations of introjected regulation

A. Wasserkampf<sup>1</sup>, J. Kleinert<sup>1</sup>

<sup>1</sup>German Sport University Cologne, Germany

Introjected regulation represents behavioural engagement to preserve/maintain a positive view of oneself. Phenomenologically, introjected regulation is described along themes of guilt, shame or ego-involvement, making it conceptually a controlled motivation. However, research showed associations with autonomous motivation that are more positive than self-determination-theory predicts. Definitions and measurement approaches of introjected regulation were compared to better understand the bright side of dark introjection.

To better understand introjected regulation, definitions from handbooks and overview articles were analysed based on their content. Results of this analysis were compared with items from questionnaires assessing introjected regulation. Contexts under investigation included academic, health care, exercise and organisational settings. Definitions and items were analysed through qualitative content analysis.

The content analysis of the definitions revealed five themes (i.e., self-related feelings, proving things to oneself, fulfilling others' expectations, reputation, compulsion) across contexts, all of which relate to processes of avoidance- or approach-motivation. The analysis of the items showed that self-related feelings (i.e., shame, guilt) were most frequently used to assess introjected regulation across contexts. Reputation and fulfilling others' expectations were used in exercise, organisational and academic contexts.

While the content analysis provides evidence for the richness of introjected regulation, it does also point to a limited exploitation of it, in the way introjected regulation is conceptualised and operationalised. Instead of exclusively using self-related feelings to assess introjected regulation, a broader consideration of this thematically rich construct should be used when assessing and interpreting results, which will result in more useful applications of the theory.

15:30 - 17:00

## Intensive long-term Ecological Momentary Assessment of bio-signals and self-reports during treatment for alcohol dependency: feasibility

E. van Lier<sup>1</sup>, M. Pieterse<sup>1</sup>, M. Noordzij<sup>1</sup>, M. Postel<sup>1,2</sup>, M. Vollenbroek-Hutten<sup>1</sup>, H. de Haan<sup>2</sup>, J. Schraagen<sup>1</sup>

<sup>1</sup>University of Twente, Netherlands

<sup>2</sup>Tactus Addiction Treatment, Netherlands

**Background:** Making alcoholics timely aware of high-risk situations, may protect them against relapse by prompting the use of coping resources. For this purpose, current advances in mobile and wearable technology provide novel opportunities, by enabling continuous tracking of fluctuations in self-reported and physiological parameters potentially relevant for craving and relapse, and by providing just-in-time feedback. This study aimed to test feasibility of an EMA protocol, collecting physiological and psychological variables predictive of relapse among clients in treatment for alcohol dependency.

**Methods:** During 100 days, 11 participants wore an E4 wristband during daytime to record heart rate and electro-dermal activity. Daily self-reports were entered on a smartphone every 3 waking hours, including negative affect, perceived stress, refusal self-efficacy, craving, and once daily alcohol consumption. Feasibility of this EMA protocol was evaluated with observations from personal contacts with participants, completeness of data, and exit interviews.

**Results:** In more than half of the participants sufficient biosensor data were obtained on a large number of days. Six wearables malfunctioned and were replaced. Adherence to the 5 daily self-reports varied from 33% (1.65 average daily entries) to 64% (3.2) among participants completing 100 days. Frequent personal contact, and applying personalized incentive schedules were necessary to keep participants motivated and compliant. No stigmatization issues due to wearing the wristband were reported by participants.

**Discussion:** Intensive long-term EMA is feasible within this vulnerable target population. However, frequent interaction with participants is needed to maintain data administration over longer periods, and to overcome technical malfunctioning of wearables.

17:00 - 18:00

**What can we learn from what people say  
about their health?  
A psychologist's view of an epidemiological  
finding**

Yael Benyamini

Professor, Bob Shapell School of Social Work, Tel Aviv  
University, Israel



Can we trust individuals' subjective evaluations of their health? And if so, should we convince health care providers to do so? Self ratings of health have consistently been found to predict mortality and future morbidity: They have an independent contribution to the prediction of future health, even after controlling for a variety of other known predictors. The talk will provide a historical overview as well as state-of-the art evidence regarding these intriguing findings, based on studies of midlife and aging, specific chronic diseases and health events, and individuals who have encountered severe trauma. The evidence will serve to highlight possible mechanisms that could account for the validity of self-rated health as well as the limits to its validity. Finally, practical issues regarding the assessment of self-rated health will be discussed.

Saturday, 25 Aug

# SYMPOSIUM: The integration of behaviour models/theories to better understand health behaviour

9:00 - 10:30

O'Flaherty

Ralf Schwarzer

9:00 - 9:15

## Theoretical assumptions and active ingredients in interventions

R. Schwarzer<sup>1,2</sup>

<sup>1</sup>Freie University Berlin, Germany

<sup>2</sup>SWPS University of Social Sciences and Humanities, Poland

**Background:** There is a need for theories, reasonable choice of appropriate psychological constructs, and assumptions about various mechanisms that might operate in a motivational or a behavioral intervention. The evaluation of efficacy of such constructs may require a post-hoc modeling approach.

**Methods:** Research examples will be given how such models might suggest evidence for the operation of active ingredients in interventions. Inspired by theories, brief two-arm interventions (RCTs) were conducted in Iran (N=166), Poland (N=287), China (N=284), and India (N=205). Self-efficacy, outcome expectancies, intention, planning, and action control were measured along with other factors, and moderation and mediation models were examined.

**Findings:** Quantitative analyses yielded time x treatment interactions ( $p < .05$ ) in all studies confirming the overall efficacy of the interventions. The main focus was on post-hoc modeling to explore the roles that active treatment ingredients may have played. This resulted in sequential mediation effects in four studies and a moderated mediation effect in one study where self-efficacy and action control operated as moderators.

**Discussion:** When factorial research designs are not suitable, post-hoc modeling provides a way to identify active ingredients of interventions. Research examples have shown how such models might suggest evidence for the operation of active ingredients. Resulting models were not always in line with a single theory, raising the question whether external factors were responsible for this inconsistency. Theories are not edged in stone, they could benefit from continuous revisions, as suggested by evidence that stems from exploratory modeling approaches.



9:15 - 9:30

## Reasoned action approach to understanding health protection and health risk behaviours

M. Conner<sup>1</sup>

<sup>1</sup>University of Leeds, United Kingdom

**Background:** The Reasoned Action Approach (RAA) developed out of the Theory of Reasoned Action and Theory of Planned Behaviour but has not yet been widely applied to understanding health behaviours. The present research employed the RAA in a prospective design to test predictions of intention and action for groups of protection and risk behaviours separately in the same sample.

**Methods:** Measures of RAA components plus past behaviour were taken in relation to eight protection and six risk behaviours in 385 adults. Self-reported behaviour was assessed one month later.

**Findings:** Multi-level modelling showed instrumental attitude, experiential attitude, descriptive norms, capacity and past behaviour were significant positive predictors of intentions to engage in protection or risk behaviours. Injunctive norms were only significant predictors of intention in protection behaviours. Autonomy was a significant positive predictor of intentions in protection behaviours and a negative predictor in risk behaviours (the latter relationship became non-significant when controlling for past behaviour). Multi-level modelling showed that intention, capacity, and past behaviour were significant positive predictors of action for both protection and risk behaviours. Experiential attitude and descriptive norm were additional significant positive predictors of risk behaviours.

**Discussion:** The RAA has utility in predicting both protection and risk health behaviours although the power of predictors may vary across these types of health behaviour. Ideas for further developing the RAA will be discussed.

9:30 - 9:45

## An integrated theoretical model of condom use in Sub-Saharan African Youth: A meta-analysis.

C. Protogerou<sup>1,2</sup>, B. Johnson<sup>3</sup>, M. Hagger<sup>4,5</sup>

<sup>1</sup>Department of Psychology, University of Cape Town, South Africa

<sup>2</sup>School of Psychology and Speech Pathology, Curtin University, Australia

<sup>3</sup>University of Connecticut, United States

<sup>4</sup>Curtin University, Australia

<sup>5</sup>Faculty of Sport and Health Sciences, University of Jyväskylä, Finland

**Background:** We tested an integrated social cognitive model derived from multiple theories of the determinants of young peoples' condom use in Sub-Saharan Africa. The model comprised seven social cognitive antecedents of condom use: Attitudes, norms, control, risk perceptions, barriers, intentions, and previous condom use.

**Methods:** We conducted a systematic search of studies including effects between at least one model construct and intended or actual condom use in young people from sub-Saharan African countries. Fifty-five studies comprising 72 independent data sets were included and subjected to random-effects meta-analysis. Demographic and methodological variables were coded as moderators. Hypotheses of the integrated model were tested using meta-analytic structural equation modelling.

**Findings:** The meta-analysis revealed significant non-trivial sample-weighted correlations among most model constructs. Moderator analyses revealed differences in six correlations for studies that included a formative research component relative to studies that did not. There was little evidence of systematic moderation of relations among model constructs by other candidate moderators. Meta-analytic structural equation models revealed significant direct effects of attitudes, norms, and control on condom use intentions, and of intention, control, and barriers on condom use. Including past condom use increased explained variance in condom use intentions and behaviour but did not attenuate model effects. There were also significant indirect effects of attitudes, norms, and control on condom use through intentions.

**Discussion:** Findings provide preliminary evidence to support the integrated condom use model in Sub-Saharan African youth. The model provides guidance on potential targets for improving the effectiveness of condom promotion interventions.

9:45 - 10:00

## The mediated effect of pre-motivational factors on physical activity: a test of the I-change model

S. Kasten<sup>1</sup>, H. de Vries<sup>1</sup>, L. van Osch<sup>1</sup>

<sup>1</sup>CAPHRI, Maastricht University, Netherlands

**Background:** The I-Change Model postulates that an awareness phase precedes motivation phase of a person, and that effects of pre-motivational factors on behavior are mediated by motivational factors. This study tests this assumption in a study on physical activity.

**Methods:** Data about pre-motivational and motivational factors as well as about physical activity was collected among 2434 Dutch adults at three points in time (baseline, after three months and after six months). First, structural equation modelling was used to investigate whether the effect of (1) knowledge, (2) cognizance, (3) cues to action, and (4) risk perception on intention and physical activity was fully mediated by motivational factors (i.e. attitudes, self-efficacy and social influence). Subsequently, a comprehensive model including all pre-motivational factors was tested on the same assumption.

**Findings:** The results indicated that the effects of all pre-motivational factors on behavior are fully mediated by motivational factors. All pre-motivational factors had the strongest effect on attitudes, ranging from  $\beta = .13$ ,  $p < .01$  for knowledge to  $\beta = .56$ ,  $p < .01$  for cognizance. All four pre-motivational factors also showed partial direct effect on intention.

**Discussion:** Our results support the need to pay attention to factors preceding motivational factors and to integrate these factors into existing social cognitive models. The results also give an indication that to increase physical activity in people, who are unaware of their behavior and the health risks associated with it, factors such as risk perception and knowledge need to be enhanced before focusing on motivation.

# SYMPOSIUM: The role of interoception for clinical research

9:00 - 10:30

Kirwan

Sandra Mai

9:00 - 9:15

## Sensing Your Body: Interoceptive Awareness and Medically Unexplained Symptoms

T. Flasiński<sup>1</sup>, A. Dierolf<sup>1</sup>, U. Voderholzer<sup>2</sup>, S. Koch<sup>2</sup>, M. Bach<sup>3</sup>, C. Asenstorfer<sup>3</sup>, A. Lutz<sup>1</sup>, S. Rost<sup>1</sup>, C. Vögele<sup>1</sup>, A. Schulz<sup>1</sup>

<sup>1</sup>University of Luxembourg, Luxembourg

<sup>2</sup>Schön Klinik Roseneck, Germany

<sup>3</sup>Ambulante Psychosoziale Rehabilitation Salzburg, Austria

According to contemporary theories of medically unexplained symptoms (MUS), alterations in interoception play a major role in symptom development and maintenance. Nevertheless, the mechanisms underlying this relationship remain unclear. To address this unresolved issue, we investigated whether individuals with varying degrees of MUS differ in different facets of interoceptive awareness as assessed with the Multidimensional Assessment of Interoceptive Awareness (MAIA) questionnaire. In study 1, 486 individuals were screened with an online version of the Screening for Somatoform Disorders (SOMS-2). Individuals with a SOMS index below 5 (low reporter,  $n=32$ ) and above 20 (high reporter,  $n=32$ ) were invited to fill in the MAIA. High symptom reporter had lower scores on the Not-Distracting, Not-Worrying, and Trusting subscales, and higher scores on the Emotional Awareness subscale (Cohen's  $d=.70-1.16$ ). In study 2, individuals with DSM-IV somatoform disorder (SFD;  $n=25$ ) were compared to individuals with major depressive disorder (MDD;  $n=24$ ) and healthy controls (HC;  $n=25$ ). The SFD and MDD groups had lower scores on the Not-Distracting, Attention Regulation, Self-Regulation, and Trusting subscales than HC. The MDD group scored lower than the SFD and HC groups on Body Listening (partial  $\eta^2=.18-.26$ ). No differences with regard to Noticing of bodily sensations were found. Groups with subclinical SFD, SFD and MDD do not differ from HC in terms of actual body perception, whereas cognitive facets of interoception, such as distraction or self-regulation are differentially affected. This highlights the necessity of including specifically targeted mindfulness-based interventions, which improve interoceptive awareness, in the prevention and treatment of SFD.

9:15 - 9:30

## Interoceptive contributions to cognitive-affective symptoms in dysautonomia

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<sup>5</sup>Psychiatry, Brighton and Sussex Medical School, Brighton, UK, United Kingdom

**Background:** Brain and body are coupled by the autonomic nervous system. For example, cognitive-affective processes evoke 'top-down' autonomic responses but are also shaped by 'bottom-up' afferent visceral feedback ('interoception'), highlighting the bidirectional relationship between the central and autonomic nervous systems.

**Methods:** We examined interoceptive and psychophysiological in processes patients with forms of dysautonomia defined by autonomic cardiovascular and thermoregulatory hyperarousal to elucidate the common psychological symptoms in these patients.

**Findings:** Comorbid cognitive-affective symptoms in the postural tachycardia syndrome, vasovagal syncope (fainting) and essential hyperhidrosis patients are typically sub-clinical and directly related to 'interoceptive anxiety' rather than being neurotic, trait or trauma-related phenomena. Furthermore, the increased visceral vigilance/anxiety in the postural tachycardia syndrome and vasovagal syncope patients relates to interoception being anxiogenic (i.e., interoceptive scores and somatic anxiety scores positively correlate) compared to healthy controls, were interoception and somatic anxiety negatively correlate, in line with interoception's homeostatic role. Moreover, postural tachycardia syndrome and vasovagal syncope patients produce exaggerated intensity-related orienting responses to randomly presented unpleasant images during the interoceptive threat of symptom provocation, in comparison to healthy controls. We also applied predictive coding models of homeostatic mediation to interoceptive and autonomic function, offering a formal framework for further elucidating our findings in both dysautonomic and healthy subjects.

**Discussion:** Together, our data endorses the role of interoception of dysautonomic responses in the psychopathology of forms of dysautonomia defined by autonomic hyperarousal, offering a novel potential therapeutic target for reducing comorbid cognitive-affective symptoms in these patients.

9:30 - 9:45

## Interoception, Exteroception and Pain

S. Mai<sup>1</sup>, E. Ferentzi<sup>2</sup>, O. Pollatos<sup>3</sup>

<sup>1</sup>Ulm University, Germany

<sup>2</sup>Eötvös Loránd University, Hungary

<sup>3</sup>University of Ulm, Germany

Pain is an unpleasant sensory and emotional experience associated with real or potential tissue damage. Thus, pain is closely linked to emotional and motivational processes. Studies have reported that the registration of physical changes (e. g. changes in heart rate) is considered to be of great importance for pain experience. Accordingly, interoceptive accuracy in heartbeat perception tasks was positively associated with pain threshold, pain tolerance and pain experience. In addition, aberrations in interoceptive perception have been detected in populations with pain symptoms: Reduced interoceptive accuracy was observed in patients with somatoform disorders as well as in patients with fibromyalgia. In somatoform patients, a dysbalance between different levels of interoceptive signal processing was observed. Exteroceptive perception, measured by the Rubberhand illusion, was also positively associated with interoceptive accuracy in healthy subjects. In this context, findings in pain patients are not known to the authors so far. The aim of the present study was to investigate the relationship between pain perception, interoceptive and exteroceptive perception. In a sample of N = 160 healthy adults (80 women, average age 23.5 years) pain threshold and pain tolerance were recorded during electrical stimulation of the forearm (Digitimer 7a). In addition, the participants took part in a Rubberhand experiment. Positive associations between interoceptive accuracy and pain tolerance were shown. The susceptibility to body illusion was not associated with pain perception. However, there was a negative correlation between subjective estimation of body illusion and interoceptive accuracy. The findings indicate the relevance of interoceptive processes for pain perception.

9:45 - 10:00

## Can you feel it? Increased somatosensory attending in the context of pain

S. Van Damme<sup>1</sup>, A. Clauwaert<sup>1</sup>, S. Schouppe<sup>1</sup>, J. Van Oosterwijck<sup>1,2</sup>, L. Danneels<sup>1</sup>

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Attention is a key factor in several pain theories aiming to explain amplified pain perception, disability, and distress. Particularly influential is the idea that patients with chronic pain are often characterized by hypervigilance, that is, heightened attending to pain-related information. Surprisingly, the available experimental evidence comes from studies measuring attention to visual representations of pain, whereas studies assessing attending to bodily sensations are missing. Furthermore, pain-related attending is most often assessed in static laboratory situations, which may not capture the dynamic nature of this phenomenon in daily life situations, for example the execution of movements. In this presentation, the need for theoretical and conceptual refinement will be argued. Furthermore, a new approach to the assessment of hypervigilance will be presented and illustrated with two recent experimental studies in healthy volunteers, in which somatosensory evoked potentials (SEPs) to tactile stimuli were assessed during the preparation of pain-inducing versus pain-free arm movements. In study 1 (N=40), anticipating an arm movement signaling pain at the moving arm significantly increased SEPs for tactile stimuli at that arm relative to the other arm. In study 2 (N=36), anticipating an arm movement signaling pain on the back significantly increased SEPs for tactile stimuli to the back. In both studies, especially early negative components were affected, suggesting increased somatosensory attending during anticipation of painful movements. Potential utility of these methods for research in clinical pain contexts will be discussed.



10:00 - 10:15

## Effects of acute yohimbine administration on interoception

L. Kuehl<sup>1</sup>, C. Deuter<sup>1</sup>, H. Breden<sup>2</sup>, C. Vögele<sup>2</sup>, K. Wingenfeld<sup>1</sup>, C. Otte<sup>1</sup>, A. Schulz<sup>2</sup>

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**Background:** Acute stress, the release of stress hormones and chronic stress can affect the processing of visceral-afferent neural signals at different brain levels, which are important for interoception. Chronic stress, especially early life stress, may impair the expression of alpha2-adrenoreceptors in the nucleus tractus solitarius, a major sensory center for visceral-afferent signals. Furthermore, chronic stress and mental disorders, such as major depression, and associated physical symptoms have been associated with a dysregulation of alpha2-adrenoreceptors. Those receptors may be crucial for the intact relaying of visceral-afferent neural traffic. As a consequence, altered interoceptive signal processing could contribute to the development and maintenance of stress-related mental disorders.

**Methods:** To further investigate this hypothesis, we conducted a study in which the effect of acute administration of yohimbine – an alpha2-adrenoreceptor blocker - on interoception was measured by the Schandry paradigm in a repeated measures design. To further disentangle potential effects of early life stress, we investigated patients (N=40) with major depression with and without adverse childhood experiences and healthy control participants (N=60) with and without adverse childhood experiences.

**Findings:** Our first analysis show a significant interaction of drug by group ( $p < .05$ ). Interestingly, yohimbine impaired the performance in the interoception paradigm especially in the healthy group with childhood adversity.

**Discussion:** Our results support an important role of early life stress for the alpha2-adrenoreceptors system with impact on interoceptive processing.

# Factors of healthy ageing

9:00 - 10:30

D'Arcy Thomson

Jasminka Despot Lucanin

9:00 - 9:15

## Childhood maltreatment and poorer physical health in later life: the moderating role of social isolation

R. Fox<sup>1</sup>, P. Hyland<sup>2</sup>, J. Power<sup>2</sup>, A. Coogan<sup>1</sup>

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<sup>2</sup>National College of Ireland, Ireland

The current study contained two objectives. First, the direct effect of childhood maltreatment (CM) and social isolation (SI) on physical health was assessed. Second, the moderating effect of SI on the relationship between CM and physical health was also examined.

This cross-sectional study utilised a U.S. subsample (n = 14,407) aged 50+ from the nationally representative NESARC-III. CM (encompassing physical, sexual, and emotional abuse, and neglect) was retrospectively examined. Physical health was assessed via self-report using the SF12-V2 and several metabolic syndrome markers (hypertension, diabetes, high triglycerides, cholesterol and BMI). A series of moderation analyses (using interaction terms within ordinary least squares (OLS) regression) were conducted to assess the direct effects of CM and SI on physical health, and to examine SI as a moderator, while controlling for age, sex, residency, and education.

CM and SI were both associated with poorer physical health on the SF12-V2 physical component summary scale and the four subscales: physical functioning, role physical, bodily pain, and general health (CM: ranging  $\beta = -.09$  to  $-.16$ ,  $p < .001$ ; SI: ranging  $\beta = -.11$  to  $-.13$ ,  $p < .001$ ). Similarly, CM ( $\beta = .09$ ,  $p < .001$ ) and SI ( $\beta = .02$ ,  $p = .01$ ) predicted increased prevalence of metabolic syndrome markers. SI was not a significant moderator of CM and physical health.

These results demonstrate the clinical importance of developing interventions to reduce the independently adverse effects of CM and SI. Further research is required to understand the long-lasting effects of CM among older adults.

9:15 - 9:30

## The association between perceived control and loneliness among healthy older people: A systematic review.

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<sup>2</sup>Queen's University of Belfast, United Kingdom

**Background:** Objective and subjective loneliness are recognized threats to older adults' health. Adopting a cognitive understanding of loneliness, cognitive resources such as causal attributions or perceived control are known to influence the experience of loneliness, but it is unclear which variables of perceived control are related to this in older adults. The main aim of this systematic review is to determine whether perceived control is a predictor of loneliness in healthy older people living in the community.

**Methods:** A protocol of the systematic review was developed and published in PROSPERO®. The search was conducted using the databases Medline, ProQuest Central, PsycINFO, Sociological Abstracts, Science Direct, Scopus, Web of Science (science and social science) for every period until December 2016. Two reviewers independently extracted the data and assessed the risk of bias of the papers using CASP.

**Findings:** Fifteen studies met the criteria for the inclusion in the review. Despite a wide variety of control variables identified in the papers, most studies found a consistently negative relationship between measures of perceived control and loneliness, suggesting that lower perceived control was associated with higher levels of loneliness in older adults. Indeed, perceived control predicts the trajectories of loneliness over time.

**Discussion:** Although longitudinal and better quality studies are needed, this review provides a more solid understanding of the role of perceived control in the context of elderly loneliness. This inform the development of better interventions to prevent or overcome loneliness in older adults.

9:30 - 9:45

## Self-efficacy for physical activity – a question of item framing and age?

L.M. Warner<sup>1,2</sup>, J. Popp<sup>3</sup>, N. Notthoff<sup>3</sup>

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<sup>2</sup>Freie Universität Berlin, Germany

<sup>3</sup>Humboldt-University Berlin, Germany

**Background:** According to socioemotional selectivity theory, aging is accompanied by a shift towards emotionally meaningful goals. In information processing, this manifests as the positivity effect: older adults process and memorise positive information relatively better than negative information compared to younger adults. Social-cognitive variables in health psychology are often assessed using positively formulated items only – especially self-efficacy. We propose that the mere formulation of a self-efficacy questionnaire may affect motivation for physical activity differentially depending on age.

**Methods:** Participants (n=275) were randomized to complete either a positively-framed self-efficacy for physical activity questionnaire or a content matched negatively-framed version. Self-efficacy, intentions for activity, and planned activity (minutes) in the next week were regressed on experimental group, age group (age 18-39, n=119; age 40-59, n=108; age 60-81, n=48), controlling for past physical activity, item comprehensibility, and depressive symptoms.

**Findings:** A significant age\*experimental group interaction emerged for the prediction of planned physical activity minutes ( $F(2, 273)=4.39, p=.014$ ). Only for participants in the oldest age group, item framing made a difference for their planned physical activity: participants 65+ years planned 350 minutes more physical activity for the upcoming week, on average, after having answered the positively as compared to the negatively framed items. No interaction effects emerged for the prediction of self-efficacy or intentions.

**Discussion:** This RCT provides initial support for the positivity effect in item framing. In order to assess the potential of item framing as an intervention technique for older adults, a measure of actual behaviour should be included in future research.

9:45 - 10:00

## Comparison of Life Satisfaction Determinants in Old Persons from Different Living Environments

J. Despot Lucanin<sup>1</sup>, D. Lucanin<sup>2</sup>, A. Koscec Bjelajac<sup>3</sup>, E.A. Delale<sup>1</sup>, M. Stambuk<sup>1</sup>

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<sup>3</sup>Institute for Medical Research and Occupational Health, Zagreb, Croatia

Life satisfaction – a person's global assessment of subjective quality of life is one of the indicators of successful psychological adaptation in later life when a person is faced with changes and losses: in health, physical and cognitive functioning, social engagement, and productive activities.

The aims of the present study were to examine the contribution of psychosocial factors to the interpretation of life satisfaction in old persons residing in retirement homes compared to the community dwelling old adults.

Participants were 240 in all, of whom 120 were retirement homes' residents in Zagreb, Croatia, on average 81 years old, and 120 were community dwelling persons, on average 75 years old. All were mobile and not diagnosed with dementia. Variables were: sociodemographic, self-perceived health, functional ability, social participation, and life satisfaction. Measurement was applied individually, by the trained interviewers, at retirement homes and at participants' own homes.

Significant differences in life satisfaction were found regarding the participants' living environment. Community dwelling old persons showed significantly higher life satisfaction than retirement homes' residents ( $t = -2,32$ ;  $p < ,05$ ). Regression analysis confirmed the significant contribution of the observed psychosocial variables to the prediction of life satisfaction ( $R^2 = ,25$ ;  $F = 12,1$ ,  $p < ,001$ ). Self-rated health significantly and positively predicted life satisfaction in the retirement homes' participants in comparison with the community dwelling participants where a greater variability was found in factors that determined their life satisfaction.

Implications of this study are in considering the potential of old persons living in different environments to adapt to well-being challenges.

10:00 - 10:15

## Ageing is in the eye of the beholder: Capturing images of ageing with photographs

V. Klusmann<sup>1,2</sup>

<sup>1</sup>University of Konstanz, Germany

<sup>2</sup>University of Bremen, Germany

**Background:** Starting in early childhood negative ageing stereotypes are assumed to be continuously embodied across the lifespan. Although the impact of negative ageing perceptions culminates in decreasing health and mortality in old age, detrimental effects on health behaviour – most pronounced in less-educated people, were shown in younger adults already. Prevalence and contents of images of ageing (IoA) across the whole lifespan have not been systematically studied.

**Methods:** 20-30-yr-old, 50-69-yr-old and 70-plus-yr-old participants (N=37) took photographs on what ageing means to them and assigned a title to each picture. The resulting photos (N=376) were subjected to mixed-method content analysis rating topic, valence, and productivity. Intercoder-reliability was  $\alpha=.80$ , 95%CI [.69,.89].

**Findings:** Pictures of 70-plus-participants were more complex and were rated as slightly less positive and more ambivalent,  $X^2(6)=14.11$ ,  $p=.028$ . Interestingly, younger participant's photos most often dealt with physical changes, whereas the young-old (50+) mostly addressed issues of life style and engagement, and in old-old (70+) the significance of living environment increased,  $X^2(2)=31.75$ ,  $p<.001$ . Concerning social embeddedness, photos got increasingly unproductive in 70+ participants,  $X^2(2)=10.26$ ,  $p=.006$ .

**Discussion:** IoA vary across different age groups in both quantity and quality. This reflects age-specific foci on health-related issues and might also indicate age-specific discourses on age and ageing. Thus, findings help to disentangle the complex interplay of IoA and health and can inform approaches for health promotion as well as those for intergenerational exchange. The photography method allows for a highly flexible, non-suggestive, non-verbal assessment of IoA that might also be suitable for hard-to-reach target groups.

# Coping and psychosocial adaptation to chronic illness

9:00 - 10:30

Anderson

Alexandra Dima



9:00 - 9:15

## Cross cultural differences in coping.

H. Zahid<sup>1</sup>, S. Orbell<sup>1</sup>, N. Geeraert<sup>1</sup>

<sup>1</sup>University of Essex, United Kingdom

**Background:** Little is known about culture's influence on stress and coping. People from different cultures may differ in terms of coping goals, strategies and outcomes when confronted with a stressor. The purpose of this study was to experimentally examine the role of individualism/collectivism in shaping coping.

**Methods:** The study was conducted in the context of a chronic illness, diabetes self-management. Adult diabetic patients were recruited in Pakistan (N = 62) and the UK (N = 72). A 2 (nationality: UK/PAK) x 2(prime: IND/COL) between groups experimental design was used with nationality and priming conditions as independent variables and coping strategies as dependent variable. Participants completed a booklet in their native language. Participants were primed with individualism or collectivism using the pronoun-circling task. COPE inventory was used to investigate the differences in the use of coping strategies.

**Findings:** A series of ANOVAS confirmed the differences in the use of coping strategies between Pakistani and British participants. For example, British participants were more likely to use 'active coping' and 'planning' while Pakistani participants were more likely to use 'focus on religion' or 'behavioural disengagement'. Priming participants with individualism/collectivism also yields significant effects; for example, when participants were primed with individualism they were more likely to use active coping as compared to the collectivistic prime condition.

**Discussion:** Data revealed distinctive patterns of cultural difference in coping in the context of diabetes self-management and individualism/collectivism dimension explained these differences.

9:15 - 9:30

## What to do when asthma worsens: behavioural beliefs versus exacerbation management actions

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<sup>3</sup>University of Aberdeen, United Kingdom

**Background:** Successful asthma self-management depends on how patients use their medication and how they respond to worsening symptoms and asthma exacerbations (AE). AE management is crucial to patients' health, but what people do to manage AE and why has received little attention to date.

**Methods:** People with asthma in France and the United Kingdom were followed up for up to 24 months. Patients  $\geq 12$  years, and parents of asthmatic children (6-12 years), completed an online questionnaire on their beliefs regarding AEs management. Four-monthly computer-assisted telephone interviews inquired over recent AEs and actions taken (self-manage, access primary care, or hospital care). We examined group differences in AE beliefs between parents and patients, and between countries. Two-level logistic regression models predicted AE actions in patients experiencing exacerbations, based on demographics and AE beliefs.

**Findings:** Of 934 participants, 577 answered online (mean age 22.11 years, 51% women, 74% French, 35% parents). Parents expressed more favourable beliefs to primary care and hospital AE management, compared to patients  $\geq 12$  years. French participants were less positive than British patients about hospital visits, and more favourable to self-management and primary care. Accessing primary care was reported during 62.3% of 541 AEs, more likely in older patients (1.05 [1.00-1.11]) and those more confident in primary care (1.40 [1.02-1.92]), and unrelated to asthma severity.

**Discussion:** AE management beliefs may influence actions during AEs. Assessing beliefs may inform intervention at individual- and system-level to support appropriate actions, e.g. discussing patient concerns during consultation, or improving AE management pathways.

9:30 - 9:45

## Help-seeking behaviour and pathways to care in patients with Primary Sjögren's Syndrome: mixed methods exploration

A.J. Williams<sup>1</sup>, B.A. Fisher<sup>2</sup>, F. Barone<sup>2</sup>, S.J. Bowman<sup>2</sup>, R. Stack<sup>1</sup>

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<sup>2</sup>University of Birmingham, United Kingdom

**Background:** Primary Sjögren's Syndrome (pSS) is an autoimmune condition affecting fluid secreting glands, causing dry and painful eyes, joint pain and fatigue. The early diagnosis of pSS is important for treatment efficacy and to relieve symptom burden. However, little is known about patient help-seeking following pSS symptom onset.

**Methods:** Ninety-two participants newly diagnosed with pSS completed questionnaires about their early symptom experience and access to care.

**Findings:** The time between the onset of symptoms and initially seeking help (known as patient delay) was a mean of 3.42 years (SD:10.30). No significant relationships were found between patient delay, family history, age and education ( $F(7, 60)=1.63, p=.14$ ). Open ended responses highlighted that patients found the early symptoms of pSS difficult to interpret and often resorted to self-care. Patients also reported being distressed by their early symptoms, however, no significant relationship was found between patient delay and the intensity of joint pain, fatigue, dry eyes, dry mouth and joint swelling ( $F(6, 74) =.97, p>.05$ ). Once help was sought it took healthcare professionals an average of 2.60 years (SD:6.27) to provide a diagnosis. Patients reported that diagnosis offered validation and help to reduce distress.

**Discussion:** The time to diagnosis in patients with pSS is long and not well explained by demographics and symptom intensity. A lack of knowledge about the relevance of ocular and oral symptoms was reported and despite symptoms being distressing patients often resorted to self-help. Further research to understand patient symptom interpretation and beliefs about early pSS symptoms is needed.

9:45 - 10:00

## Which depressive symptoms change in response to exercise? Results from a randomised controlled trial

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**Background:** Regular exercise is beneficial for reducing depression, however, less is known about the effects of exercise on specific depressive symptoms. This study investigates differential symptom effects of an integrated motivational interviewing (MI) and multi-modal exercise intervention among youth with major depressive disorder (MDD).

**Methods:** This was a two-armed, randomised controlled trial. Sixty-eight participants (mean age 20.8 years) who met DSM-IV diagnostic criteria for MDD were randomised to an intervention group (n=34) or waitlist control. The intervention group received an initial session of MI followed by a 12-week, group based, supervised exercise intervention (3 times per week, 1 hour per session). Generalised estimating equations were used to examine changes in the Beck Depression Inventory-II (BDI-II) total score and symptom subscales (cognitive, affective and somatic) from baseline to post- intervention.

**Findings:** There were significantly greater improvements in the BDI-II total score from baseline to post-intervention among the intervention group (mean BDI-II change: 17.48 vs 4.43,  $p < .001$ ) with significant differential effects observed among cognitive and affective but not somatic subscales. A closer examination of individual BDI-II items showed significant mean improvements in the cognitive items pertaining to self-worth, with trend level improvements in suicidal thoughts while items from the affective domain included, interest/activity and irritability. Although the somatic subscale was not significantly improved by the intervention, energy (a component of that sub-scale) was.

**Discussion:** The findings from this study suggest exercise may have similar antidepressant effects as would be expected from psychological therapies improving negative cognitions and emotional health.

10:00 - 10:15

## Goal adjustment is not related to cognitive inflexibility in persons with an acquired brain injury

G. Van Bost<sup>1,2</sup>, S. Van Damme<sup>1</sup>, G. Crombez<sup>1</sup>

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<sup>2</sup>Centrum voor Ambulante Revalidatie Ter Kouter, Belgium

**Background:** After an acquired brain injury (ABI), previous life goals have often become unattainable. Flexible goal adjustment is hypothesized to be a key factor in promoting acceptance of illness and maintaining wellbeing. This study investigated whether the cognitive inflexibility, a characteristic for ABI, was negatively related to flexible goal adjustment.

**Methods:** 68 individuals (18-65 years) with an ABI completed a test of cognitive flexibility (WCST, Wiscconsin Card Sorting Test). Flexible goal adjustment was measured by the Wrosch Goal Adjustment Scale (GAS). Acceptance was measured by the acceptance subscale of the Illness Cognitions Questionnaire (ICQ). Measurements of wellbeing were disease-specific Quality of Life (EBIQ; European Brain Injury Questionnaire), life satisfaction (SWLS; Satisfaction with Life Scale). The relationships between cognitive flexibility, goal adjustment and acceptance and wellbeing were investigated by means of regression analyses.

**Findings:** After statistically controlling for demographic factors and ABI characteristics, goal disengagement and reengagement explained a unique proportion ( $F_{\text{Change}(2,60)} = 12.73$ ,  $p < 0.001$ ) of the variance in life satisfaction. Quality of life ( $\beta = -0.42$ ,  $p < 0.001$ ) and acceptance ( $\beta = 0.47$ ,  $p < 0.001$ ) were only accounted for by goal reengagement. No significant association between the WCST and any of the variables was found.

**Discussion:** Flexible goal adjustment is not related to cognitive flexibility. Interventions aimed at disengagement of previous unattainable goals and at the reengagement towards new, more feasible goals are useful. This may lead to more acceptance and more wellbeing.

# Mobile technology and self- management

9:00 - 10:30

Larmor

Johanna Nurmi

9:00 - 9:15

## A smartphone application for self-management of asthma: a usability and feasibility study

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<sup>1</sup>NUI Galway, Ireland

**Background:** Asthma affects 334 million people worldwide and leads to 250,000 annual premature deaths. It is the most common chronic disease in Ireland, affecting 1 in 10 adults. Approximately 60% of these people have uncontrolled symptoms. Asthma control depends on patient self-management behaviours. The influence of mobile technology is increasing and has demonstrated potential to support self-management of health. The aim of this study was to explore a potential method of support for asthma self-management in adults. The main objective was to assess the usability and feasibility of a smartphone app for asthma self-management in an adult asthma cohort.

**Methods:** A randomised feasibility design was employed to compare the intervention (app incorporating 8 BCTs) with the control group (app incorporating 3 BCTs). A sample of 101 adult participants with asthma, a prescribed form of ICS and an Android phone were recruited (N=101, 70 female), with a mean age of 27.92 years (SD=9.73). The procedure involved an online questionnaire with a 4-week follow-up. The System Usability Scale was used to measure usability and open-ended questions were used to capture feasibility. An independent t-test was used to analyse usability data and a summative content analysis was used to analyse feasibility data.

**Findings:** The control group reported their app as significantly more usable than the intervention group  $t(23)=-2.12$ ,  $p=.045$ ,  $d=.86$ . User comments provided by the intervention and control group were 60% and 50% positive, respectively.

**Discussion:** The intervention and control asthma self-management apps were usable and feasible in an adult asthma cohort.

9:15 - 9:30

## Precious n-of-1 trial: how within-person variation in motivational determinants explains changes in daily physical activity

J. Nurmi<sup>1,2</sup>, K. Knittle<sup>1</sup>, F. Naughton<sup>3</sup>, S. Sutton<sup>2</sup>, T. Ginchev<sup>4</sup>, F. Khattak<sup>4</sup>, A. Haukkala<sup>1</sup>

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<sup>4</sup>Aalto University, Finland

**Background:** An important and under-researched method of increasing our understanding of the psychological determinants of motivation and physical activity is through daily, individual measurements. The Precious smartphone app was designed to collect both self-reported and objective data while delivering repeated, randomised interventions with elements from motivational interviewing and biofeedback (Firstbeat) to explore how interventions affect psychological determinants of physical activity and activity itself.

**Method:** Fifteen healthy adults answered daily questions on the Precious app on motivation, self-efficacy, perceived barriers, and happiness during a six-week factorial n-of-1 trial (N of observations = 440). The app also gathered data on the intervention engagement, and activity bracelets collected objective physical activity data. The association between psychological determinants and intervention effects on daily steps were analysed using multilevel modelling (level 1: daily observations, level 2: participants).

**Findings:** Individuals' motivation and activity profiles differed significantly, justifying multilevel modelling. Aggregated scores of self-efficacy and motivation were the strongest predictors of daily activity. Pain, illness, and perceived barriers were only weakly associated with activity. Happiness predicted afternoon motivation but not physical activity. Neither motivation nor daily steps were higher on intervention days with digital motivational interviewing components or Firstbeat biofeedback than on non-intervention days

**Discussion:** Motivational constructs predicted daily steps over and above pain, illness, and perceived barriers. Findings on the association of motivational constructs and physical activity, measured daily within individuals, have value in confirming the predictive nature of these constructs, central to many behavioural theories. Increasing motivation with digital content remains a challenge.



9:30 - 9:45

## Testing an mHealth-based mindful eating intervention to improve students' eating behaviours: A randomised controlled trial

L. Van Rhoon<sup>1</sup>, I. Stewart<sup>1</sup>

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**Background:** Consistent exposure to obesogenic food cues can encourage unhealthy eating behaviours in University Students. This study tested a four-week mHealth-based mindful eating intervention designed to counteract this pattern by improving implicit food attitudes, explicit food behaviours, and perceived stress in 18-25 year old non-clinical male and female university students.

**Methods:** A prospective single-blind randomised controlled superiority trial with pre-post design was implemented to assess the mindful eating intervention (n = 14) against an active control intervention (n = 14). Participants were tested on days 1 and 28—completing a battery of self-report questionnaires including: the Three-Factor Eating Questionnaire, Mindful Eating Questionnaire, and Perceived Stress Scale; followed by an Implicit Association Test. Body Mass index was calculated using participants' self-reported height and weight. Fruit and vegetable intake was assessed weekly.

**Findings:** Significant increases in mindful eating ( $t(11) = -2.26$ ,  $p = .047$ ,  $d = -0.68$ ) and decreases in perceived stress ( $t(11) = 2.29$ ,  $p = .045$ ,  $d = 0.69$ ) were found within the mindful eating group after four weeks; while no significant differences were observed within the control group on any outcome measure. Accounting for baseline scores, there were no significant between-group differences at four weeks. Mindful eating participants rated the intervention as simple and enjoyable.

**Discussion:** When adapted into a new comprehensive mobile app, the mindful eating intervention may be an engaging and cost-effective weight gain prevention and stress reduction tool for university students.

9:45 - 10:00

## Mobile food reporting and adherence rates in real-life: early drop-outs vs. selective meal reporting

K. Zieseimer<sup>1</sup>, L.M. König<sup>1</sup>, K. Villinger<sup>1</sup>, D.R. Wahl<sup>1</sup>, H.T. Schupp<sup>1</sup>, B. Renner<sup>1</sup>

<sup>1</sup>University of Konstanz, Germany

**Background:** Mobile methods (e.g., ecological momentary assessment, EMA) become increasingly popular for assessing food intake due to their higher ecological validity compared to standard self-reports. However, mobile methods also represent a substantial burden for participants because active data collection methods require frequent and reliable input from participants. Currently, only few empirical studies examined study adherence in mobile or EMA studies. Therefore, the aim of this study was to assess the adherence rates over a period of three weeks.

**Methods:** The participants photographed and classified their meals using a smartphone app that was developed as part of the SMARTACT project. Participation was on a voluntary basis.

**Findings:** In total 10.681 meals were reported. In Week 1 (w1) 4,260 meals were reported ( $M=4.0 \pm 1.6$ ;  $N=151$ ). However, in Week 2 (w2) and Week 3 (w3) less meals were reported by less participants (w2: 3,264 meals,  $M=3.4 \pm 1.6$ ;  $N=136$ ; w3: 3,157 meals,  $M=3.4 \pm 1.6$ ;  $N=133$ ). Although the absolute number of reported meals decreased after the first week of the study, the proportion of the different meal types remained stable across time: breakfast (w1=24%, w2=27%, w3=26%), lunch (w1=20%, w2=21%, w3=22%), dinner (w1=23%, w2=24%, w3=25%), snacks (w1=28%, w2=22%, w3=22%).

**Discussion:** Adherence rate decreased after one week. However, the decline was unrelated to the meal type, indicating that adherence rates depends more on individual differences ('early drop-outs') and less on meal types ('selective meal reporting').

10:00 - 10:15

## A content analysis of tailored feedback videos delivered in an eHealth weight loss intervention

K. Ryan<sup>1</sup>, L. Murphy<sup>1</sup>, C. Linehan<sup>1</sup>, S. Dockray<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

**Background:** Intensive behavioural interventions with personalised feedback are effective in producing clinically significant weight loss, but are often labour-intensive, expensive and inconvenient for participants. eHealth weight-loss interventions may scale better and be more convenient to participants, but are less effective. This study aims to improve the design of eHealth weight-loss systems, through studying in detail the value added by health professionals.

**Methods:** This study examines a blended eHealth system, where participants get weekly feedback from health coaches via personalised videos. A sample of ten participants' feedback videos were gathered during an 8-week weight loss intervention. Two researchers independently coded the feedback for behaviour change techniques (BCTs) (using the BCTT-v1 taxonomy). The message of each feedback video was derived using discourse analysis. We aimed to: 1. identify the most prevalent BCTs used in the feedback; 2. explore the contextual conditions under which they were used.

**Findings:** Six BCTs were implemented in all feedback videos, e.g. 'Review behaviour goals', 'Social support (unspecified)'. Non-adherent participants received different sets of BCTs, e.g. 'Discrepancy between current behaviour and goal', 'Behaviour substitution.' Coaches gave detailed descriptive, evaluative and comparative tailored feedback, in a manner that held the participant accountable and provided personalised support.

**Discussion:** Current research suggests that theoretical components (e.g. BCTs) are underused in eHealth behaviour change interventions. We found that human coaches use a range of BCTs and add accountability and social support beyond purely automated eHealth systems. Our results can inform how future eHealth systems can incorporate the 'human' element in their delivery.

# Occupational Stress: predictors, mediators and moderators

9:00 - 10:30

Dillon

Annalisa Casini

9:00 - 9:15

## How does social innovation impact on health of elderly homecare sector workers?

A. Casini<sup>1</sup>, R. Bensliman<sup>2</sup>, E. Callorda Fossati<sup>1</sup>, F. Degavre<sup>1</sup>, C. Mahieu<sup>2</sup>

<sup>1</sup>Université catholique de Louvain - UCL, Belgium

<sup>2</sup>Université libre de Bruxelles - ULB, Belgium

**Background:** This study addresses the question of the well-being of employees of social enterprises (SE) taking part (SI) vs. not taking part (NSI) in a social innovative project. Articulating insights from occupational health, and socio-economics, this article builds on the concept of social innovation (service vs. workplace innovation). Three hypotheses are tested: if working for a SE bring employees a high level of well-being (H1), taking part as a worker in SI, no matter of which kind, should further strengthen this association (H2). Alternatively, employees' well-being should increase when workplace innovation, rather than service innovation, principles are implemented. (H3).

**Methods:** The sample covers 10 elder homecare SE (N employees = 1134) in Wallonia (Belgium). SI projects were identified and selected using a Delphi procedure. We considered management and leadership remodelling, flexible organisation of work working smarter, continuous development of skills and competences, and modernisation of labour relations as dimensions of workplace innovation. Emotional exhaustion (EE) and somatic stress symptoms (SSS) were considered as indicators of well-being.

**Findings:** Results confirm H1 and H3, but not H2. Workers present significantly low levels of EE and SSS. No difference was found between SI and NSI workers regarding these indicators while the workplace innovation dimensions globally predict them.

**Discussion:** Previous research in social economy advances the idea that pursuing a social mission (e.g., providing care not-for-profit) is per se a source of well-being. Our results encourage social entrepreneurs to pay greater attention to the workplace innovation dimensions instead of focussing mainly on service innovation.

9:15 - 9:30

## Job strain, coping, and mental health among Canadian military personnel: Does mental health training help?

J. Lee<sup>1</sup>, D. Boulos<sup>1</sup>, M. Zamorski<sup>1</sup>, K. Sudom<sup>1</sup>

<sup>1</sup>Department of National Defence, Canada

**Background:** Promoting adaptive coping has been a central objective of mental health training aimed at enhancing resilience. The aim of the current study was to examine whether the associations of job strain, coping, and mental health vary as a function of the level of mental health training received among military personnel.

**Methods:** Path analysis was conducted on data from the 2013 Canadian Forces Mental Health Survey to assess the indirect effect of job strain on positive mental health (PMH) through coping among Canadian Armed Forces Regular Force members who either received or did not receive mental health training in the past 5 years (N=6696).

**Findings:** Job strain was associated with using less adaptive coping strategies and, along with such coping strategies, predicted lower PMH. Furthermore, results revealed an indirect effect of job strain on PMH through coping. However, the magnitude of associations between job strain, coping, and PMH varied little by mental health training.

**Discussion:** Results provide support for the view that job strain can diminish personal resources and thereby negatively impact coping responses. These associations did not appear to differ substantially according to whether service members received mental health training, although the study was limited to investigating only work-related stress. Additional research is needed to determine whether similar findings would emerge in relation to deployment-related or interpersonal stress. The association of job strain with less adaptive coping underscores the importance of providing service members with access to support programs and services to help them through stressful situations.

9:30 - 9:45

## Work stress and psychological problems in teachers: what is the role of self-directedness?

T. Hintsala<sup>1</sup>, K. Gluschkoff<sup>2</sup>, M. Elovainio<sup>2</sup>

<sup>1</sup>University of Eastern Finland, Finland

<sup>2</sup>University of Helsinki, Finland

**Background:** It has been shown that work stress is a risk for mental health problems. There might be individual factors that play a role in the association between work stress and psychological wellbeing. Self-directedness (i.e. the ability to regulate and adapt behavior to the demands of environment) may decrease the harmful effects of work stress on psychological problems. We examined whether self-directedness or its subscales play any role in the association between work stress and psychological problems in teachers.

**Methods:** The participants of the cross-sectional study were 76 teachers. We assessed psychological problems with the General Health Questionnaire and self-directedness with the Temperament and Character Inventory (Cloninger, 1993). Work stress was assessed according to job demands-job control (Karasek & Theorell, 1990) and ERI models (Siegrist et.al 2004). Analyses were conducted using bootstrapped regression.

**Findings:** Job strain ( $b=0.11$ ,  $p=0.043$ ) and ERI ( $b=0.80$ ,  $p=0.044$ ) were related to psychological problems. Self-directedness, responsibility and self-acceptance explained a part of the association between work stress and psychological problems. Self-directedness explained 86/73%, responsibility 53/70% and self-acceptance 54/36% of the association between job strain/ERI and psychological problems, respectively.

**Discussion:** Self-directedness, responsibility and self-acceptance seem to attenuate the association between work stress on psychological problems in teachers. We suggest that ability to regulate behavior that enhances person-environment fit, control one's actions and solve problems, and importance of self-esteem and realistic acceptance of one's limitations play a role in mental wellbeing. These should be taken into account when developing occupational health interventions aimed at decreasing psychological problems in teachers.

9:45 - 10:00

## The effect of age on the correlation between work intensity and mental well-being

L. Lindert<sup>1</sup>, L. Ansmann<sup>2</sup>, S. Zeike<sup>1</sup>, M. Swora<sup>1</sup>, K. Choi<sup>1</sup>, H. Pfaff<sup>1</sup>

<sup>1</sup> University Hospital Cologne, Germany

<sup>2</sup> Carl von Ossietzky University Oldenburg, Germany

**Background:** Incapacity of work days due to mental health problems cause high costs for the national economy. One factor that affects mental health is work intensity. Taking into account the demographic change the purpose of this study was to examine the effect of age on the relationship between mental health and work intensity. The research question was as follows: Does age influence the correlation between work intensity and mental well-being?

**Method:** The data of this study are based on an employee survey of a German medium-sized company in 2015. 551 employees received a paper-based questionnaire, 404 participated (response rate: 73%). The effect of age on the stated correlation was examined through multiple linear regression analysis.

**Findings:** A moderator effect of age has been demonstrated. The age group of 40-49 year olds differed significantly from the reference group of the 50+ year olds ( $p < .05$ ). In the other age groups no significant difference to the reference group was found. Complementary correlation analyzes showed a correlation between mental health and work intensity for younger and older workers, but not for those aged 40-49.

**Discussion:** A possible explanation for the stated moderator effect could be up to different coping strategies in the various age groups. Coping strategies in the age group of 40-49 year olds might be best developed as they have higher cognitive and physical capacities than older colleagues and additionally have more experience in dealing with stress than younger colleagues. This assumption has to be checked in further research.



10:00 - 10:15

## Do new organizational patterns of Video Display Terminals use affect workers' psycho-social and physical health?

M. Soria-Oliver<sup>1</sup>, J.S. López Martínez<sup>2,3</sup>, F. Torrano<sup>1</sup>

<sup>1</sup>UNIR-Universidad Internacional de la Rioja, Spain

<sup>2</sup>Universidad Pública de Navarra, Spain

<sup>3</sup>Universidad Autónoma de Madrid, Spain

The use of Video Display Terminals (VDT) as a work tool has experienced a significant increase within work settings. Though physical and psychological disorders related to computer VDT are widely analyzed, evidences about the patterns of use of VDT associated to mobile devices (laptops, tablet, mobile phones) and their consequences are already scarce. Objectives of the present study were, first, to explore current pattern of use of VDT within work settings and, second, to explore the relationship between potential patterns of use and specific psychological and physical disorders. An intentional sample of 1256 workers answered to an on-line questionnaire in which the following indicators were measured: pattern of use of different VDT (kind of device, time of use, sequence of pauses), Subjective Mental Workload Scale (Rolo, Diaz & Hernández, 2009), Postural and Visual Load Scale (Laubli, Hunting y Grandjean, 1981) and Nordic Musculoskeletal Questionnaire (Baron, Hales & Hurrell, 1996). Cluster analysis revealed that DVT use can be classified in five different patterns: reduced VDT use, prevalent desktop VDT use, prevalent laptop VDT use, combined laptop/smartphone VDT use and combined desktop/smartphone VDT use. Patterns of use of DVT showed relationships with different subjective mental workload dimensions and, specifically, cognitive requirements and information complexity ( $F=9,65$ ;  $p<.001$ ) and health consequences for workers ( $F=4,85$ ;  $p=.001$ ), also with global visual fatigue ( $F=6,79$ ;  $p>.000$ ) and with different indicator of musculoskeletal diseases like neck disease ( $F=4,85$ ;  $p=.001$ ) and wrist diseases ( $f=4,03$ ;  $p<.003$ ). Our results suggest the need specific preventive measures for each of the existing VDT use patterns.

# Behaviour change strategies and process

9:00 - 10:30

Room 201

Mark Grindle

## Oral Presentations

9:00 - 9:15

Abstract Withdrawn

9:15 - 9:30

## ProACT: Interventional Strategies to Support Individuals Self-Managing With Multimorbidity Using a Digital Behavioural Change Intervention.

J. Dinsmore<sup>1</sup>, E. Murphy<sup>1</sup>, C. Hannigan<sup>1</sup>, J. Kuiper<sup>2</sup>, S. Smith<sup>3</sup>, A. Jacobs<sup>2</sup>, E. O'Byrne<sup>4</sup>, M. Galvin<sup>1</sup>, J. Doyle<sup>3</sup>

<sup>1</sup>Trinity College Dublin, Ireland

<sup>2</sup>imec, Belgium

<sup>3</sup>Dundalk Institute of Technology (DkIT), Ireland

<sup>4</sup>Home Instead Senior Care, Ireland

**Background:** An estimated 50 million people in the European Union live with multimorbidity, which deeply impacts quality of life. Digital Behavioural Change Interventions (DBCI's) seek to empower persons with multimorbidity (PwMs) to play a proactive role in self-managing their health. ProACT aims to develop and evaluate a novel DBCI to improve and advance home-based self-management for PwMs supported by their care ecosystem.

**Methods:** Systematic application of the 8-Stage Behavioural Change Wheel (BCW) process was conducted via consensus meetings with 6 researchers in Ireland and Belgium over 6 months to determine the behavioural targets and associated interventional strategies for ProACT. This process was informed by a 9 month qualitative study across Ireland and Belgium involving 124 individuals (38 PwMs and 86 support stakeholders e.g. caregivers and healthcare professionals) to determine system user needs and requirements.

**Findings:** Outcomes produced 3 behavioural targets with associated intervention strategies. Two targets were determined for the PwM as; Target 1: Measure and view key symptom readings; Target 2: Recognise and record change in symptoms from baseline readings. The third target was determined for the support stakeholders; Target 3: Confirm viewing of key symptom readings.

**Discussion:** Intervention strategies for Targets 1 and 2 seek to evaluate if PwMs adopt the system into their self-management routine and engage with their symptoms over time to enhance their self-management skills. For Target 3, the intervention strategy seeks to evaluate if support stakeholders view symptom reading for the PwM they are caring for in order to enhance engagement with the system.

9:30 - 9:45

## Harnessing Gamification for population level changes in physical activity - Findings from 18 UK interventions.

M. Harris<sup>1</sup>

<sup>1</sup>Cardiff Metropolitan, United Kingdom

**Introduction:** A recent systematic review concluded insufficient evidence for current population physical activity (PA) interventions, citing scalability as a major contributory factor.

**Method:** Beat the Street aims to address this key implementation issue by turning a town/city into a game where players register their walking and cycling journeys by tapping a smartcard on RFID readers called 'Beat Boxes' placed on lampposts around the town or city. Players monitor their progress via a website where they can see their own and their team's progress, and the overall city/town target. During registration, participants complete a questionnaire which includes a validated PA measure. Follow up surveys take place at the end of the game and 6 months later.

**Results:** In 2016, 18 community-wide interventions were delivered throughout the UK. N=300,053 people played the game, N=64,512 registered online, N=6,767 completed a follow-up survey immediately following the game period and N=3,103 people completed a follow-up survey 6 months post-intervention. Pre-test/post-test analyses revealed a 9% increase in the proportion of people meeting the WHO PA guidelines and a 5% decrease in the proportion of people reporting being inactive ( $p < .05$ ). Further analysis revealed a 8% increase in the proportion of people meeting the CMO PA guidelines and a 4% decrease in the proportion of people reporting being inactive, six-months post-intervention ( $p < .05$ ).

**Conclusion:** The findings from 18 Beat the Street interventions delivered across the UK in 2016 suggests that gamification is a promising approach to changing population levels of PA.

9:45 - 10:00

## The Impact of Health Information Avoidance on Breast Self-Examination Practices

C.N. Sen<sup>1</sup>, L. Baruh<sup>2</sup>, S. Karakose<sup>1</sup>

<sup>1</sup>Isik University, Turkey

<sup>2</sup>Koç University, Turkey

Some individuals actively pursue health information while others avoid it. Grasping health information leads to earlier diagnoses and better treatments outcomes, while health information avoidance is associated with later diagnoses and higher mortality rates . This study looks at the impact of health information avoidance on breast self-examination in the next month using the Integrated Behavioural Model (IBM), a later version of the Theory of Planned Behaviour. Women between 20 and 30 years of age who were high school graduates with no history of cancer or chronic gynaecologic condition from 33 urban areas in Turkey (N = 136) participated in the study. Women were classified as low (1.00 to 2.50) or high (2.51 to 5.00) on health information avoidance. Women with lower HIA women had higher percentage of completion in the past month (36.0% vs 23.1%) and higher intentions to perform BSE in the next month (M Lower HIA = 3.31, M Higher HIA = 2.84,  $t(134) = 2.73$ ,  $p \leq 0.01$ ). Results of IBM analyses revealed the importance of only attitudes ( $\beta = 0.61$ ;  $p \leq 0.000$ ; model  $R^2 = 0.54$ ) for women with lower levels of health information avoidance and only descriptive norms ( $\beta = 0.54$  ;  $p \leq 0.000$ ; model  $R^2=0.36$ ) for women with higher levels of health information avoidance. To raise screening intentions, health information avoidance must be considered as well as varying factors among the two groups.

10:00 - 10:15

## Wearable Activity Technology And Action-Planning (WATAAP) promoting physical activity in cancer survivors: randomised controlled trial

C. Maxwell-Smith<sup>1</sup>, P. Cohen<sup>2</sup>, C. Platell<sup>2</sup>, M. Levitt<sup>2</sup>, P. Salama<sup>2</sup>, S. Salfinger<sup>2</sup>, J. Tan<sup>3</sup>, P. Tan<sup>2</sup>, G.R. Mohan<sup>4</sup>, G. Makin<sup>2</sup>, D. Hince<sup>5</sup>, T. Boyle<sup>6</sup>, S. Hardcastle<sup>1</sup>

<sup>1</sup>Curtin University, Australia

<sup>2</sup>St John of God Health Care, Australia

<sup>3</sup>Women Centre, Australia

<sup>4</sup>Hollywood Private Hospital, Australia

<sup>5</sup>Notre Dame University, Australia

<sup>6</sup>University of South Australia, Australia

**Background:** Colorectal and gynecologic cancer survivors are at cardiovascular risk due to comorbidities and sedentary behavior, warranting an intervention to increase physical activity. The Health Action Process Approach (HAPA) is a promising theoretical framework for health behaviour change, and wearable physical activity trackers offer a novel means of self-monitoring physical activity for cancer survivors.

**Methods:** Participants: Cancer survivors (N=68) who were insufficiently active and presented cardiovascular risk factors were recruited. Design: Participants were randomly allocated to treatment and control groups, following the baseline assessment. Each participant in the treatment group was given a Fitbit Alta to monitor activity for the trial duration, attended two HAPA-based group sessions, and a support phone call. Measures: Trial assessments at baseline, the end of the 12-week intervention, and at 24-week follow-up measured physical activity (using accelerometer data), BMI, blood pressure, and HAPA outcomes. Analysis: Data analysis used the Group x Time interaction from a General Linear Mixed Model analysis.

**Findings:** At 12 weeks mean weekly MVPA increased by  $50 \pm 120$  min/week in the intervention group compared to controls who showed a mean weekly increase of  $15 \pm 107$  minutes in the control group (mean baseline MVPA 82 mins per week).

**Discussion:** Findings at 12-weeks revealed a significant increase in physical activity in the treatment group. The 24-week assessment will reveal further insight on the effectiveness of wearable trackers, without additional support. This intervention will provide a novel contribution concerning the use of wearable trackers and self-monitoring to improve physical activity in cancer survivors.

10:15 - 10:30

## Efficacy of Physician Training in Behavioural Change Counseling: A Systematic Review

A.I. Dragomir<sup>1,2</sup>, S.L. Bacon<sup>2,3</sup>, C.A. Julien<sup>1,2</sup>, V. Gosselin Boucher<sup>1,2</sup>, K.L. Lavoie<sup>1,2</sup>

<sup>1</sup>Université du Québec à Montréal, Canada

<sup>2</sup>Montreal Behavioural Medicine Centre, Canada

<sup>3</sup>Concordia University, Canada

**Background:** Poor health behaviours (smoking, poor diet, physical inactivity) represent major underlying causes of non-communicable chronic diseases (NCDs). Physician training in behavior change counselling (BCC) may improve their ability to manage behavioral risk factors among NCD patients.

**Objective:** (1) To conduct a systematic review on the efficacy of BCC training programs for physicians, and (2) to describe the program content, dose and structure of the most efficacious programs in order to inform the design and dissemination of future training programs.

**Methods:** Using the PRISMA guidelines, a database search up to January 2018, yielded 1889 unique articles that were screened by 2 authors; 9 studies met inclusion criteria and were retained for analysis.

**Results:** 100% of studies reported significant improvements in BCC skills among physicians. Most programs targeted improving provider-patient collaboration, supporting patient autonomy, and use of open questions to elicit “change-talk”. Providing supervision and feedback were important for skill acquisition. However, reporting quality was poor (Downs & Black score =17/28) and many methodological limitations were noted: studies were heterogeneous (content, dose, structure), samples were small (n’s=12-60), 78% had no comparison group, less than 30% of skills taught were formally assessed, and no studies reported on trainer fidelity or trainee adherence.

**Conclusion:** Programs targeting improving patient-provider collaboration, supporting patient autonomy and eliciting “change-talk” were generally efficacious, but poor reporting quality and methodological weaknesses across studies limits the ability to determine what should be delivered and how. Further research emphasizing more rigorous training program development and testing is warranted.



# Social context and health behaviours during childhood

9:00 - 10:30

McMunn

Vera Araujo Soares

9:00 - 9:15

## Physical violence and/or Bullying in School: Its influence on Body Weight among School-age children.

P. Repetto<sup>1</sup>

<sup>1</sup>P. Universidad Catolica de Chile, Chile

Obesity is an increasing health problem among young population around the world and efforts to control these trends have been unsuccessful (WHO, 2016). In Chile, close to one third of the children are overweight, problem that has increased in the last decades (PAHO, 2015). In fact, undernutrition was an important problem among children in Chile 30 years ago, and today is overweight and obesity.

Several factors are associated with overweight and obesity (biological, social, cultural, psychological). Researchers have suggested that interpersonal violence plays a role. We know less about the differential role that the type of violence to which children are exposed may influence body weight. We examined how being bullied and/or physically injured in school was associated with risk of being overweight, obese or underweight, controlling for type of diet.

We used the Global School Health Survey data conducted in 2013 with school-age children in Chile. Participants were 2049 youth (7th- 12th grade, 50.1% males), 42.7% were overweight, 14.5% obese and 0.5% underweight. We examined the role of diet (eating fruits and vegetables, fast food, soft drinks, alcohol use), being physically injured and having suffered bullying in school on: overweight, obese and underweight. Being female, eating fast food, drinking soft drinks were associated with overweight. For obese, we found association with being bullied, and eating less fruits and vegetables diet. For underweight, we did not find any significant predictors.

These findings suggest that the being bullied has a greater impact on weight as compared to physical violence in school.

9:15 - 9:30

## "My child can watch TV, because it is exercising": Mother's handling of children's media consumption

T. Radtke<sup>1</sup>, S. Biddle<sup>2</sup>, J. Lüscher<sup>1</sup>, U. Scholz<sup>1</sup>

<sup>1</sup>University of Zurich, Switzerland

<sup>2</sup>University of Southern Queensland, Australia

**Background:** Children regularly use electronic media such as computers. Intensive and uncontrolled use is associated with risks such as sedentary behavior. Thus, the regulation of media consumption by parents is particularly important for younger children. However, first evidence shows that parents often legitimate media consumption through justification strategies rather than regulating it. The aim of this study was therefore to examine whether parents justify their children's media consumption by compensatory health behaviors (CHBs). One example would be that media consumption is considered justifiable as long as the child is physically active.

**Methods:** Participants were 105 mother-child dyads (Child: Mage = 11.7, SDage = .85; Mother: Mage = 43.8, SDage = 4.46). Mother and child reported for 14 days in daily diaries their daily media consumption, physical activity (PA) and CHBs.

**Findings:** Multi-level analyses revealed that higher CHB's of the mother are associated with increased media consumption and less PA of the child (level 2). Furthermore, on days with higher than usual CHBs of the mothers, children reported more media consumption than usual (level 1). However, no relationship between maternal CHBs and the PA of the child on a daily basis (level 1) was found.

**Discussion:** The results suggest that parents legitimate children's media consumption through cognitive justification strategies. One explanation could be that the regulation of children's media consumption is difficult for parents. This might be due to the large number of media devices or their importance in everyday life. Interventions should strengthen parental competencies regarding the regulation of media consumption.

9:30 - 9:45

## Examining determinants of eating patterns in preschool settings in disadvantaged areas in Ireland

S. Dashdondog<sup>1</sup>, C. Kelly<sup>1,2</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

<sup>2</sup>Director of Health Promotion Research Centre, Ireland

The preschool years are a critical period for growth and development and dietary habits formed at this age may persist in later years. Therefore preschools serve as an important setting for health promotion. Research shows that there is a strong relationship between low socioeconomic status and poor quality diets. The aim of this study was to identify individual, environmental and socio-cultural factors that influence eating patterns among preschool children attending childcare settings in disadvantaged areas in Ireland.

Ten preschools in Galway City took part in the study, with staff, parents and children engaged as participants. The presentation will outline the mixed methods study design and the research tools employed to examine mealtime practices, staff feeding behaviour, and children's dietary habits at preschool. Participative workshops with children (n=64), interviews with staff (n=10) and with parents (n=9) were also undertaken. The methodological and ethical challenges will be described.

The data are being managed using NVivo software and thematic analysis is being used to analyse meal-time observations and interviews. Analyses to date show that staff and parents are willing to learn more about nutrition but no clear systematic approach to nutrition education for staff and parents is evident to them. Children's food preferences depend largely on parents' preferences and family environment. Preschools offer a willing setting to improve nutrition and coupled with the home setting is key to improving young children's dietary habits.

9:45 - 10:00

## Effects of maternal stress, depression and self-esteem on children's dietary intake at 18 months

S. Buggy<sup>1</sup>, K. Matvienko-Sikar<sup>1</sup>, K. O'Neill<sup>1</sup>, P. Kearney<sup>1</sup>

<sup>1</sup>University College Cork, Ireland

**Background:** One in four Irish children are currently overweight or obese, with dietary intake a key contributing factor for weight outcomes. Low socioeconomic status and maternal well-being have been identified as risk factors for poor dietary intake and childhood overweight and obesity. This research aims to explore effects of maternal stress, depression and self-esteem on dietary intake at 18 months in a low socioeconomic area.

**Methods:** Data from the Preparing for Life study were analysed. Participants were parents (n=332 dyads) from low socioeconomic areas in North Dublin. Maternal stress, depression and self-esteem were measured using the Parenting Daily Hassles Questionnaire (PDH); the Edinburgh Postnatal Depression Scale (EPDS) and the Rosenberg Self-Esteem Scale (RSES), respectively. Child dietary intake was measured using a Food Frequency Questionnaire. Based on national guidelines, three binary outcomes were created; overall healthy diet, healthy fruit and vegetable intake and healthy sugar and fat intake. Logistic regression models examined associations between stress, depression and self-esteem and the dietary outcomes outlined above.

**Findings:** Two hundred and twenty-five parents (response rate of 68%) completed measures when children were 18 months old. At this time, only 0.9% of children were receiving healthy diet. No significant associations were found between stress, depression or self-esteem and dietary outcomes.

**Discussion:** Maternal stress, depression and self-esteem did not demonstrate significant effects on children's dietary intake at 18 months in this sample. At 18 months, environmental factors, including low socioeconomic status, may represent a greater risk of childhood overweight and obesity than maternal factors.

10:00 - 10:15

## The family response to fussy eating in school-aged children: A qualitative study

H. Wolstenholme<sup>1</sup>, C. Heary<sup>1</sup>, C. Kelly<sup>1</sup>

<sup>1</sup>National University of Ireland, Galway, Ireland

**Background:** Fussy eating is the unwillingness to eat both familiar and novel foods, to the extent that it is problematic for the parent, child, or family relationships. It is associated with family conflict and can impact nutritional intake. Although much research has examined parenting practices in response to fussy eating, less research has explored other processes such as goals, emotions, and family communication. The majority of research has focused on pre-schoolers. Therefore, this research aims to explore how families experience, and respond to, fussy eating in school-aged children.

**Methods:** This qualitative study involved in-depth semi-structured interviews with 20 parents who had at least one child in first (6-7 years) or third (8-9 years) class in participating schools. Interviews were transcribed verbatim and analysed using inductive thematic analysis.

**Findings:** Five themes were identified regarding families' experience and response to fussy eating: Thinking Differently, Dealing with Emotions, Parenting Practices, Talking about Fussy Eating, and Autonomy: Getting the Balance Right. These themes provide insight into parents' feeding goals and beliefs, how families deal with negative emotions such as concern and distress, and the variety of practices parents use in response to fussy eating. As children get older, their communication skills develop and autonomy increases. Findings illustrate how families of school-aged children communicate about fussy eating and find the balance between child autonomy and parent control.

**Discussion:** Findings may inform future quantitative research on fussy eating and may be useful in the development of policies and guidelines that promote healthy family food behaviours.

11:00 - 12:00

## Multi-level approaches to behaviour change in implementation research: How far can we push our theories?

Jill Francis

Professor of Health Services Research, School of Health Sciences, City University of London, England



It is sometimes claimed that theories and models used in health psychology target behaviour change at the level of the individual. However, it has been argued that implementation research (i.e., research that investigates behaviour change among healthcare professionals, to enhance the quality of care they deliver) requires consideration of four levels of change: the individual healthcare professional; team; organisation; and health system. This talk illustrates the multi-level nature of theoretically-informed, behaviourally-focused implementation research. Using a matrix framework, with columns being the four levels and rows being key elements of the research (sampling, randomisation, intervention delivery, intervention receipt, primary outcome measurement and process evaluation), a conceptual analysis is presented of implementation projects conducted in healthcare settings (community, primary care, hospital care) in several healthcare systems. These projects show that behaviourally-focused implementation research is demonstrably a multi-level endeavour. However, applying theoretical models of behaviour change at different levels may require adaptation of methods for operationalising models of behaviour change and for measuring theoretical constructs. These methods are discussed.



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